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Joint Statement Between President George W. Bush and Prime Minister Manmohan Singh on Nuclear Cooperation

[Reproduced from: White House Press Release, 18 July 2005]

Prime Minister Manmohan Singh and President Bush today declare their resolve to transform the relationship between their countries and establish a global partnership. As leaders of nations committed to the values of human freedom, democracy and rule of law, the new relationship between India and the United States will promote stability, democracy, prosperity and peace throughout the world. It will enhance our ability to work together to provide global leadership in areas of mutual concern and interest.

Building on their common values and interests, the two leaders resolve:

- To create an international environment conducive to promotion of democratic values, and to strengthen democratic practices in societies which wish to become more open and pluralistic.
- To combat terrorism relentlessly. They applaud the active and vigorous counterterrorism cooperation between the two countries and support more international efforts in this direction. Terrorism is a global scourge and the one we will fight everywhere. The two leaders strongly affirm their commitment to the conclusion by September of a UN comprehensive convention against international terrorism.

The Prime Minister's visit coincides with the completion of the Next Steps in Strategic Partnership (NSSP) initiative, launched in January 2004. The two leaders agree that this provides the basis for expanding bilateral activities and commerce in space, civil nuclear energy and dual-use technology.

Drawing on their mutual vision for the U.S.-India relationship, and our joint objectives as strong long-standing democracies, the two leaders agree on the following:

FOR THE ECONOMY

- Revitalize the U.S.-India Economic Dialogue and launch a CEO Forum to harness private sector energy and ideas to deepen the bilateral economic relationship.
- Support and accelerate economic growth in both countries through greater trade, investment, and technology collaboration.
- Promote modernization of India's infrastructure as a prerequisite for the continued growth of the Indian economy. As India enhances its investment climate, opportunities for investment will increase.
- Launch a U.S.-India Knowledge Initiative on Agriculture focused on promoting teaching, research, service and commercial linkages.

FOR ENERGY AND THE ENVIRONMENT

- Strengthen energy security and promote the development of stable and efficient energy markets in India with a view to ensuring adequate, affordable energy supplies and conscious of the need for sustainable development. These issues will be addressed through the U.S.-India Energy Dialogue.
- Agree on the need to promote the imperatives of development and safeguarding the environment, commit to developing and deploying cleaner, more efficient, affordable, and diversified energy technologies.

FOR DEMOCRACY AND DEVELOPMENT

- Develop and support, through the new U.S.-India Global Democracy Initiative in countries that seek such assistance, institutions and resources that strengthen the foundations that

make democracies credible and effective. India and the U.S. will work together to strengthen democratic practices and capacities and contribute to the new U.N. Democracy Fund.

- Commit to strengthen cooperation and combat HIV/AIDs at a global level through an initiative that mobilizes private sector and government resources, knowledge, and expertise.

FOR NON-PROLIFERATION AND SECURITY

- Express satisfaction at the New Framework for the U.S.-India Defense Relationship as a basis for future cooperation, including in the field of defense technology.
- Commit to play a leading role in international efforts to prevent the proliferation of Weapons of Mass Destruction. The U.S. welcomed the adoption by India of legislation on WMD (Prevention of Unlawful Activities Bill).
- Launch a new U.S.-India Disaster Relief Initiative that builds on the experience of the Tsunami Core Group, to strengthen cooperation to prepare for and conduct disaster relief operations.

FOR HIGH-TECHNOLOGY AND SPACE

- Sign a Science and Technology Framework Agreement, building on the U.S.-India High-Technology Cooperation Group (HTCG), to provide for joint research and training, and the establishment of public-private partnerships.
- Build closer ties in space exploration, satellite navigation and launch, and in the commercial space arena through mechanisms such as the U.S.-India Working Group on Civil Space Cooperation.
- Building on the strengthened nonproliferation commitments undertaken in the NSSP, to remove certain Indian organizations from the Department of Commerce's Entity List.

Recognizing the significance of civilian nuclear energy for meeting growing global energy demands in a cleaner and more efficient manner, the two leaders discussed India's plans to develop its civilian nuclear energy program.

President Bush conveyed his appreciation to the Prime Minister over India's strong commitment to preventing WMD proliferation and stated that as a responsible state with advanced nuclear technology, India should acquire the same benefits and advantages as other such states. The President told the Prime Minister that he will work to achieve full civil nuclear energy cooperation with India as it realizes its goals of promoting nuclear power and achieving energy security. The President would also seek agreement from Congress to adjust U.S. laws and policies, and the United States will work with friends and allies to adjust international regimes to enable full civil nuclear energy cooperation and trade with India, including but not limited to expeditious consideration of fuel supplies for safeguarded nuclear reactors at Tarapur. In the meantime, the United States will encourage its partners to also consider this request expeditiously. India has expressed its interest in ITER and a willingness to contribute. The United States will consult with its partners considering India's participation. The United States will consult with the other participants in the Generation IV International Forum with a view toward India's inclusion.

The Prime Minister conveyed that for his part, India would reciprocally agree that it would be ready to assume the same responsibilities and practices and acquire the same benefits and advantages as other leading countries with advanced nuclear technology, such as the United States. These responsibilities and practices consist of identifying and separating civilian and military nuclear facilities and programs in a phased manner and filing a declaration regarding its civilians facilities with the International Atomic Energy Agency (IAEA); taking a decision to place voluntarily its civilian nuclear facilities under IAEA safeguards; signing and adhering to an Additional Protocol with respect to civilian nuclear facilities; continuing India's unilateral moratorium on

nuclear testing; working with the United States for the conclusion of a multilateral Fissile Material Cut Off Treaty; refraining from transfer of enrichment and reprocessing technologies to states that do not have them and supporting international efforts to limit their spread; and ensuring that the necessary steps have been taken to secure nuclear materials and technology through comprehensive export control legislation and through harmonization and adherence to Missile Technology Control Regime (MTCR) and Nuclear Suppliers Group (NSG) guidelines.

The President welcomed the Prime Minister's assurance. The two leaders agreed to establish a working group to undertake on a phased basis in the months ahead the necessary actions mentioned above to fulfill these commitments. The President and Prime Minister also agreed that they would review this progress when the President visits India in 2006.

The two leaders also reiterated their commitment that their countries would play a leading role in international efforts to prevent the proliferation of weapons of mass destruction, including nuclear, chemical, biological and radiological weapons.

In light of this closer relationship, and the recognition of India's growing role in enhancing regional and global security, the Prime Minister and the President agree that international institutions must fully reflect changes in the global scenario that have taken place since 1945. The President reiterated his view that international institutions are going to have to adapt to reflect India's central and growing role. The two leaders state their expectations that India and the United States will strengthen their cooperation in global forums.

Prime Minister Manmohan Singh thanks President Bush for the warmth of his reception and the generosity of his hospitality. He extends an invitation to President Bush to visit India at his convenience and the President accepts that invitation.

U.S.-India Joint Statement

[Excerpts reproduced from: White House Press Release, 2 March 2006]

President George W. Bush and Prime Minister Manmohan Singh today expressed satisfaction with the great progress the United States and India have made in advancing our strategic partnership to meet the global challenges of the 21st century. Both our countries are linked by a deep commitment to freedom and democracy; a celebration of national diversity, human creativity and innovation; a quest to expand prosperity and economic opportunity worldwide; and a desire to increase mutual security against the common threats posed by intolerance, terrorism, and the spread of weapons of mass destruction. The successful transformation of the U.S.-India relationship will have a decisive and positive influence on the future international system as it evolves in this new century.

Reviewing the progress made in deepening the global partnership between the United States and India since their Joint Statement of July 18, 2005, the President and the Prime Minister reaffirm their commitment to expand even further the growing ties between their two countries. Consistent with this objective, the two leaders wish to highlight efforts the United States and India are making together in the following areas, where they have:

[...] (eds.)

FOR ENERGY SECURITY AND A CLEAN ENVIRONMENT

(1) Welcomed the successful completion of discussions on India's separation plan and looked forward to the full implementation of the commitments in the July 18, 2005 Joint Statement on nuclear cooperation. This historic accomplishment will permit our countries to move forward towards our common objective of full civil nuclear energy cooperation between India and the United States and between India and the international community as a whole.

(2) Welcomed the participation of India in the ITER initiative on fusion energy as an important further step towards the common goal of full nuclear energy cooperation.

(3) Agreed on India's participation in FutureGen, an international public-private partnership to develop new, commercially viable technology for a clean coal near-zero emission power project. India will contribute funding to the project and participate in the

Government Steering Committee of this initiative.

(4) Welcomed the creation of the Asia Pacific Partnership on Clean Development and Climate, which will enable India and the U.S. to work together with other countries in the region to pursue sustainable development and meet increased energy needs while addressing concerns of energy security and climate change. The Partnership will collaborate to promote the development, diffusion, deployment and transfer of cleaner, cost-effective and more efficient technologies and practices.

[...] (eds.)

FOR GLOBAL SAFETY AND SECURITY

(1) Noted the enhanced counter-terrorism cooperation between the two countries and stressed that terrorism is a global scourge that must be fought and rooted out in every part of the world.

(2) Welcomed the increased cooperation between the United States and India in the defense area, since the New Framework for the U.S.-India Defence Relationship was signed on June 28, 2005, as evidenced by successful joint exercises, expanded defence cooperation and information sharing, and greater opportunities to jointly develop technologies and address security and humanitarian issues.

[...] (eds.)

(4) Welcomed India's intention to join the Container Security Initiative aimed at making global maritime trade and infrastructure more secure and reducing the risk of shipping containers being used to conceal weapons of mass destruction.

(5) Reiterated their commitment to international efforts to prevent the proliferation of weapons of mass destruction.

[...] (eds.)

Joint Statement by US Secretary of State Condoleezza Rice and Indian Minister of External Affairs Shri Pranab Mukherjee

[27 July 2007]

The United States and India have reached a historic milestone in their strategic partnership by completing negotiations on the bilateral agreement for peaceful nuclear cooperation, also known as the "123 agreement." This agreement will govern civil nuclear trade between our two countries and open the door for American and Indian firms to participate in each other's civil nuclear energy sector.

The conclusion of negotiations on this agreement marks a major step forward in fulfilling the promise of full civil nuclear cooperation as envisioned by President Bush and Prime Minister Manmohan Singh.

The successful completion of the text permits us to move forward on the U.S.-India Civil Nuclear Cooperation initiative, first announced by the two leaders on July 18, 2005, and reaffirmed on March 2, 2006. The next steps include India's negotiation of a safeguards agreement with the IAEA and support for nuclear trade with India in the forty-five member Nuclear Suppliers Group. Once these additional actions have been completed, President Bush will submit the text of the agreement to the U.S. Congress for final approval.

Civil nuclear cooperation between the United States and India will offer enormous strategic and economic benefits to both countries, including enhanced energy security, a more environmentally-friendly energy source, greater economic opportunities, and more robust nonproliferation efforts.

This achievement reinforces the growing bilateral relationship between two vibrant democracies. We are committed to the strategic partnership outlined by President Bush and Prime Minister Manmohan Singh, and look forward to working together to implement this historic initiative.

**Agreement for Cooperation Between the
Government of the United States of America and
the Government of India Concerning Peaceful
Uses of Nuclear Energy (123 Agreement)**

[Released 8 August 2007]

The Government of India and the Government of the United States of America, hereinafter referred to as the Parties,

RECOGNIZING the significance of civilian nuclear energy for meeting growing global energy demands in a cleaner and more efficient manner;

DESIRING to cooperate extensively in the full development and use of nuclear energy for peaceful purposes as a means of achieving energy security, on a stable, reliable and predictable basis;

WISHING to develop such cooperation on the basis of mutual respect for sovereignty, non-interference in each other's internal affairs, equality, mutual benefit, reciprocity and with due respect for each other's nuclear programmes;

DESIRING to establish the necessary legal framework and basis for cooperation concerning peaceful uses of nuclear energy;

AFFIRMING that cooperation under this Agreement is between two States possessing advanced nuclear technology, both Parties having the same benefits and advantages, both committed to preventing WMD proliferation;

NOTING the understandings expressed in the India - U.S. Joint Statement of July 18, 2005 to enable full civil nuclear energy cooperation with India covering aspects of the associated nuclear fuel cycle;

AFFIRMING their support for the objectives of the International Atomic Energy Agency (IAEA) and its safeguards system, as applicable to India and the United States of America, and its importance in ensuring that international cooperation in development and use of nuclear energy for peaceful purposes is carried out under arrangements that will not contribute to the proliferation of nuclear weapons or other nuclear explosive devices;

NOTING their respective commitments to safety and security of peaceful uses of nuclear energy, to adequate physical protection of nuclear material and effective national export controls;

MINDFUL that peaceful nuclear activities must be undertaken with a view to protecting the environment;

MINDFUL of their shared commitment to preventing the proliferation of weapons of mass destruction; and

DESIROUS of strengthening the strategic partnership between them;

Have agreed on the following:

ARTICLE 1 - DEFINITIONS

For the purposes of this Agreement:

(A) "By-product material" means any radioactive material (except special fissionable material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special fissionable material. By-product material shall not be subject to safeguards or any other form of verification under this Agreement, unless it has been decided otherwise by prior mutual agreement in writing between the two Parties.

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

(C) "Conversion" means any of the normal operations in the nuclear fuel cycle, preceding fuel fabrication and excluding enrichment, by which uranium is transformed from one chemical form to another - for example, from uranium hexafluoride (UF₆) to uranium dioxide (UO₂) or from uranium oxide to metal.

(D) "Decommissioning" means the actions taken at the end of a facility's useful life to retire the facility from service in the manner that provides adequate protection for the health and safety of the decommissioning workers and the general public, and for the environment. These actions can range from closing down the

facility and a minimal removal of nuclear material coupled with continuing maintenance and surveillance, to a complete removal of residual radioactivity in excess of levels acceptable for unrestricted use of the facility and its site.

(E) "Dual-Use Item" means a nuclear related item which has a technical use in both nuclear and non-nuclear applications.

(F) "Equipment" means any equipment in nuclear operation including reactor, reactor pressure vessel, reactor fuel charging and discharging equipment, reactor control rods, reactor pressure tubes, reactor primary coolant pumps, zirconium tubing, equipment for fuel fabrication and any other item so designated by the Parties.

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

(H) "Information" means any information that is not in the public domain and is transferred in any form pursuant to this Agreement and so designated and documented in hard copy or digital form by mutual agreement by the Parties that it shall be subject to this Agreement, but will cease to be information whenever the Party transferring the information or any third party legitimately releases it into the public domain.

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

(J) "Major critical component" means any part or group of parts essential to the operation of a sensitive nuclear facility or heavy water production facility.

(K) "Non-nuclear material" means heavy water, or any other material suitable for use in a reactor to slow down high velocity neutrons and increase the likelihood of further fission, as may be jointly designated by the appropriate authorities of the Parties.

(L) "Nuclear material" means (1) source material and (2) special fissionable material. "Source material" means uranium containing the mixture of isotopes occurring in nature; uranium depleted in the isotope 235; thorium; any of the foregoing in the form of metal, alloy, chemical compound, or concentrate; any other material containing one or more of the foregoing in such concentration as the Board of Governors of the IAEA shall from time to time determine; and such other materials as the Board of Governors of the IAEA may determine or as may be agreed by the appropriate authorities of both Parties. "Special fissionable material" means plutonium, uranium-233, uranium enriched in the isotope 233 or 235, any substance containing one or more of the foregoing, and such other substances as the Board of Governors of the IAEA may determine or as may be agreed by the appropriate authorities of both Parties. "Special fissionable material" does not include "source material". Any determination by the Board of Governors of the IAEA under Article XX of that Agency's Statute or otherwise that amends the list of materials considered to be "source material" or "special fissionable material" shall only have effect under this Agreement when both Parties to this Agreement have informed each other in writing that they accept such amendment.

(M) "Peaceful purposes" include the use of information, nuclear material, equipment or 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 other military purpose. Provision of power for a military base drawn from any power network, production of radioisotopes to be used for medical purposes in military environment for diagnostics, therapy and sterility assurance, and other similar purposes as may be mutually agreed by the Parties shall not be regarded as military purpose.

(N) "Person" means any individual or any entity subject to the territorial jurisdiction of either Party but does not include the Parties.

(O) "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.

(P) "Sensitive nuclear facility" means any facility designed or used primarily for uranium enrichment, reprocessing of nuclear fuel, or fabrication of nuclear fuel containing plutonium.

(Q) "Sensitive nuclear technology" means any information that is not in the public domain and that is important to the design, construction, fabrication, operation, or maintenance of any sensitive nuclear facility, or other such information that may be 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.

2. The purpose of the Agreement being to enable full civil nuclear energy cooperation between the Parties, the Parties may pursue cooperation in all relevant areas to include, but not limited to, the following:

- a. Advanced nuclear energy research and development in such areas as may be agreed between the Parties;
- b. Nuclear safety matters of mutual interest and competence, as set out in Article 3;
- c. Facilitation of exchange of scientists for visits, meetings, symposia and collaborative research;
- d. Full civil nuclear cooperation activities covering nuclear reactors and aspects of the associated nuclear fuel cycle including technology transfer on an industrial or commercial scale between the Parties or authorized persons;
- e. Development of a strategic reserve of nuclear fuel to guard against any disruption of supply over the lifetime of India's reactors;
- f. Advanced research and development in nuclear sciences including but not limited to biological research, medicine, agriculture and industry, environment and climate change;
- g. Supply between the Parties, whether for use by or for the benefit of the Parties or third countries, of nuclear material;
- h. Alteration in form or content of nuclear material as provided for in Article 6;
- i. Supply between the Parties of equipment, whether for use by or for the benefit of the Parties or third countries;
- j. Controlled thermonuclear fusion including in multilateral projects; and
- k. Other areas of mutual interest as may be agreed by the Parties.

3. Transfer of nuclear material, non-nuclear material, equipment, components and information 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. Nuclear material, non-nuclear material, equipment, components and information 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 this Agreement only upon confirmation, by the appropriate authority of the recipient Party to the appropriate authority of the supplier Party that such items both will be subject to the Agreement and have been received by the recipient Party.

4. The Parties affirm that the purpose of this Agreement is to provide for peaceful nuclear cooperation and not to affect the unsafeguarded nuclear activities of either Party. Accordingly, nothing in this Agreement shall be interpreted as affecting the rights of the Parties to use for their own purposes nuclear material, non-nuclear material, equipment, components, information or technology produced, acquired or developed by them independent of any nuclear material, non-nuclear material, equipment, components, information or technology transferred to them pursuant to this Agreement. This Agreement shall be implemented in a manner so as not to hinder or otherwise interfere with any other activities involving the use of nuclear material, non-nuclear material, equipment, components, information or technology and military nuclear facilities produced, acquired or developed by them independent of this Agreement for their own purposes.

ARTICLE 3 - TRANSFER OF INFORMATION

1. Information concerning the use of nuclear energy for peaceful purposes may be transferred between the Parties. Transfers of information may be accomplished through reports, data banks and computer programs and any other means mutually agreed to by the Parties. Fields that may be covered include, but shall not be limited to, the following:

- a. Research, development, design, construction, operation, maintenance and use of reactors, reactor experiments, and decommissioning;
- b. The use of nuclear material in physical, chemical, radiological and biological research, medicine, agriculture and industry;
- c. Fuel cycle activities to meet future world-wide civil nuclear energy needs, including multilateral approaches to which they

are parties for ensuring nuclear fuel supply and appropriate techniques for management of nuclear wastes;

- d. Advanced research and development in nuclear science and technology;
- e. Health, safety, and environmental considerations related to the foregoing;
- f. Assessments of the role nuclear power may play in national energy plans;
- g. Codes, regulations and standards for the nuclear industry;
- h. Research on controlled thermonuclear fusion including bilateral activities and contributions toward multilateral projects such as the International Thermonuclear Experimental Reactor (ITER); and
- i. Any other field mutually agreed to by the Parties.

2. Cooperation pursuant to this Article may include, but is not limited to, training, exchange of personnel, meetings, exchange of samples, materials and instruments for experimental purposes and a balanced participation in joint studies and projects.

3. This Agreement does not require the transfer of any information regarding matters outside the scope of this Agreement, or information that the Parties are not permitted under their respective treaties, national laws, or regulations to transfer.

4. Restricted Data, as defined by each Party, shall not be transferred under this Agreement.

ARTICLE 4 - NUCLEAR TRADE

1. The Parties shall facilitate nuclear trade between themselves in the mutual interests of their respective industry, utilities and consumers and also, where appropriate, trade between third countries and either Party of items obligated to the other Party. The Parties recognize that reliability of supplies is essential to ensure smooth and uninterrupted operation of nuclear facilities and that industry in both the Parties needs continuing reassurance that deliveries can be made on time in order to plan for the efficient operation of nuclear installations.

2. Authorizations, including export and import licenses as well as authorizations or consents to third parties, relating to trade, industrial operations or nuclear material movement should be consistent with the sound and efficient administration of this Agreement and should not be used to restrict trade. It is further agreed that if the relevant authority of the concerned Party considers that an application cannot be processed within a twomonth period it shall immediately, upon request, provide reasoned information to the submitting Party. In the event of a refusal to authorize an application or a delay exceeding four months from the date of the first application the Party of the submitting persons or undertakings may call for urgent consultations under Article 13 of this Agreement, which shall take place at the earliest opportunity and in any case not later than 30 days after such a request.

ARTICLE 5 - TRANSFER OF NUCLEAR MATERIAL, NON-NUCLEAR MATERIAL, EQUIPMENT, COMPONENTS AND RELATED TECHNOLOGY

1. Nuclear material, non-nuclear material, equipment and components may be transferred for applications consistent with this Agreement. Any special fissionable material transferred under this Agreement shall be low enriched uranium, except as provided in paragraph 5.

2. Sensitive nuclear technology, heavy water production technology, sensitive nuclear facilities, heavy water production facilities and major critical components of such facilities may be transferred under this Agreement pursuant to an amendment to this Agreement. Transfers of dual-use items that could be used in enrichment, reprocessing or heavy water production facilities will be subject to the Parties' respective applicable laws, regulations and license policies.

3. Natural or 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 to by the Parties.

4. The quantity of nuclear material transferred under this Agreement shall be consistent with 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 for their lifetime, use as samples, standards, detectors, and targets, and the accomplishment of other purposes as may be agreed by the Parties.

5. Small quantities of special fissionable material may be transferred for use as samples, standards, detectors, and targets, and for such other purposes as the Parties may agree.

6.

(a) The United States has conveyed its commitment to the reliable supply of fuel to India. Consistent with the July 18, 2005, Joint Statement, the United States has also reaffirmed its assurance to create the necessary conditions for India to have assured and full access to fuel for its reactors. As part of its implementation of the July 18, 2005, Joint Statement the United States is committed to seeking agreement from the U.S. Congress to amend its domestic laws and to work with friends and allies to adjust the practices of the Nuclear Suppliers Group to create the necessary conditions for India to obtain full access to the international fuel market, including reliable, uninterrupted and continual access to fuel supplies from firms in several nations.

(b) To further guard against any disruption of fuel supplies, the United States is prepared to take the following additional steps:

- i) The United States is willing to incorporate assurances regarding fuel supply in the bilateral U.S.-India agreement on peaceful uses of nuclear energy under Section 123 of the U.S. Atomic Energy Act, which would be submitted to the U.S. Congress.
- ii) The United States will join India in seeking to negotiate with the IAEA an India-specific fuel supply agreement.
- iii) The United States will support an Indian effort to develop a strategic reserve of nuclear fuel to guard against any disruption of supply over the lifetime of India's reactors.
- iv) If despite these arrangements, a disruption of fuel supplies to India occurs, the United States and India would jointly convene a group of friendly supplier countries to include countries such as Russia, France and the United Kingdom to pursue such measures as would restore fuel supply to India.

(c) In light of the above understandings with the United States, an India-specific safeguards agreement will be negotiated between India and the IAEA providing for safeguards to guard against withdrawal of safeguarded nuclear material from civilian use at any time as well as providing for corrective measures that India may take to ensure uninterrupted operation of its civilian nuclear reactors in the event of disruption of foreign fuel supplies. Taking this into account, India will place its civilian nuclear facilities under India-specific safeguards in perpetuity and negotiate an appropriate safeguards agreement to this end with the IAEA.

ARTICLE 6 - NUCLEAR FUEL CYCLE ACTIVITIES

In keeping with their commitment to full civil nuclear cooperation, both Parties, as they do with other states with advanced nuclear technology, may carry out the following nuclear fuel cycle activities:

- i) Within the territorial jurisdiction of either Party, enrichment up to twenty percent in the isotope 235 of uranium transferred pursuant to this Agreement, as well as of uranium used in or produced through the use of equipment so transferred, may be carried out.
- ii) Irradiation within the territorial jurisdiction of either Party of plutonium, uranium-233, high enriched uranium and irradiated nuclear material transferred pursuant to this Agreement or used in or produced through the use of non-nuclear material, nuclear material or equipment so transferred may be carried out.
- iii) With a view to implementing full civil nuclear cooperation as envisioned in the Joint Statement of the Parties of July 18, 2005, the Parties grant each other consent to reprocess or otherwise alter in form or content nuclear material transferred pursuant to this Agreement and nuclear material and by-product material used in or produced through the use of nuclear material, non-nuclear material, or equipment so transferred. To bring these rights into effect, India will establish a new national reprocessing facility dedicated to reprocessing safeguarded nuclear material under IAEA safeguards and the Parties will agree on arrangements and procedures under which such reprocessing or other alteration in form or content will take place in this new facility. Consultations on

arrangements and procedures will begin within six months of a request by either Party and will be concluded within one year. The Parties agree on the application of IAEA safeguards to all facilities concerned with the above activities. These arrangements and procedures shall include provisions with respect to physical protection standards set out in Article 8, storage standards set out in Article 7, and environmental protections set forth in Article 11 of this Agreement, and such other provisions as may be agreed by the Parties. Any special fissionable material that may be separated may only be utilized in national facilities under IAEA safeguards.

iv) Post-irradiation examination involving chemical dissolution or separation of irradiated nuclear material transferred pursuant to this Agreement or irradiated nuclear material used in or produced through the use of non-nuclear material, nuclear material or equipment so transferred may be carried out.

ARTICLE 7 - STORAGE AND RETRANSFERS

1. Plutonium and uranium 233 (except as either may be 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, may be stored in facilities that are at all times subject, as a minimum, to the levels of physical protection that are set out in IAEA document INFCIRC 225/REV 4 as it may be revised and accepted by the Parties. Each Party shall record such facilities on a list, made available to the other Party. A Party's list shall be held confidential if that Party so requests. Either Party may make changes to its list by notifying the other Party in writing and receiving a written acknowledgement. Such acknowledgement shall be given no later than thirty days after the receipt of the notification and shall be limited to a statement that the notification has been received. If there are grounds to believe that the provisions of this sub-Article are not being fully complied with, immediate consultations may be called for. Following upon such consultations, each Party shall ensure by means of such consultations that necessary remedial measures are taken immediately. Such measures shall be sufficient to restore the levels of physical protection referred to above at the facility in question. However, if the Party on whose territory the nuclear material in question is stored determines that such measures are not feasible, it will shift the nuclear material to another appropriate, listed facility it identifies.

2. Nuclear material, non-nuclear material, equipment, components, and information transferred pursuant to this Agreement and any special fissionable material produced through the use of nuclear material, non-nuclear material or equipment so transferred shall not be transferred or re-transferred to unauthorized persons or, unless the Parties agree, beyond the recipient Party's territorial jurisdiction.

ARTICLE 8 - PHYSICAL PROTECTION

1. Adequate physical protection shall be maintained with respect to nuclear material and equipment transferred pursuant to this Agreement and nuclear material used in or produced through the use of nuclear material, non-nuclear material or equipment so transferred.

2. To fulfill the requirement in paragraph 1, each Party shall apply measures in accordance with (i) levels of physical protection at least equivalent to the recommendations published in IAEA document INFCIRC/225/Rev.4 entitled "The Physical Protection of Nuclear Material and Nuclear Facilities," and in any subsequent revisions of that document agreed to by the Parties, and (ii) the provisions of the 1980 Convention on the Physical Protection of Nuclear Material and any amendments to the Convention that enter into force for both Parties.

3. The Parties will keep each other informed through diplomatic channels of those agencies or authorities having responsibility for ensuring that levels of physical protection for nuclear material in their territory or under their jurisdiction or control are adequately met and having responsibility for coordinating response and recovery operations in the event of unauthorized use or handling of material subject to this Article. The Parties will also keep each other informed through diplomatic channels 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.

4. The provisions of this Article shall be implemented in such a

manner as to avoid undue interference in the Parties' peaceful nuclear activities and so as to be consistent with prudent management practices required for the safe and economic conduct of their peaceful nuclear programs.

ARTICLE 9 - PEACEFUL USE

Nuclear material, equipment and components transferred pursuant to this Agreement and nuclear material and by-product material used in or produced through the use of any nuclear material, equipment, and components so transferred shall not be used by the recipient Party for any nuclear explosive device, for research on or development of any nuclear explosive device or for any military purpose.

ARTICLE 10 - IAEA SAFEGUARDS

1. Safeguards will be maintained with respect to all nuclear materials and equipment transferred pursuant to this Agreement, and with respect to all special fissionable 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.

2. Taking into account Article 5.6 of this Agreement, India agrees that nuclear material and equipment transferred to India by the United States of America pursuant to this Agreement and any nuclear material used in or produced through the use of nuclear material, non-nuclear material, equipment or components so transferred shall be subject to safeguards in perpetuity in accordance with the India-specific Safeguards Agreement between India and the IAEA [*identifying data*] and an Additional Protocol, when in force.

3. Nuclear material and equipment transferred to the United States of America pursuant to this Agreement and any nuclear material used in or produced through the use of any nuclear material, non-nuclear 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, which entered into force on December 9, 1980, and an Additional Protocol, when in force.

4. If the IAEA decides that the application of IAEA safeguards is no longer possible, the supplier and recipient should consult and agree on appropriate verification measures.

5. Each Party shall take such measures as are necessary to maintain and facilitate the application of IAEA safeguards in its respective territory provided for under this Article.

6. Each Party shall establish and maintain a system of accounting for and control of nuclear material transferred pursuant to this Agreement and nuclear material used in or produced through the use of any material, equipment, or components so transferred. The procedures applicable to India shall be those set forth in the India-specific Safeguards Agreement referred to in Paragraph 2 of this Article.

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' peaceful nuclear activities and so as to be consistent with prudent management practices required for the safe and economic conduct of their peaceful nuclear programs.

ARTICLE 11 - ENVIRONMENTAL PROTECTION

The Parties shall cooperate in following the best practices for minimizing the impact on the environment from any radioactive, chemical or thermal contamination arising from peaceful nuclear activities under this Agreement and in related matters of health and safety.

ARTICLE 12 - IMPLEMENTATION OF THE AGREEMENT

1. This Agreement shall be implemented in a manner designed:

- to avoid hampering or delaying the nuclear activities in the territory of either Party;
- to avoid interference in such activities;
- to be consistent with prudent management practices

required for the safe conduct of such activities; and

- to take full account of the long term requirements of the nuclear energy programs of the Parties.

2. The provisions of this Agreement shall not be used to:

- secure unfair commercial or industrial advantages or to restrict trade to the disadvantage of persons and undertakings of either Party or hamper their commercial or industrial interests, whether international or domestic;
- interfere with the nuclear policy or programs for the promotion of the peaceful uses of nuclear energy including research and development; or
- impede the free movement of nuclear material, non nuclear material and equipment supplied under this Agreement within the territory of the Parties.

3. When execution of an agreement or contract pursuant to this Agreement between Indian and United States organizations requires exchanges of experts, the Parties shall facilitate entry of the experts to their territories and their stay therein consistent with national laws, regulations and practices. When other cooperation pursuant to this Agreement requires visits of experts, the Parties shall facilitate entry of the experts to their territory and their stay therein consistent with national laws, regulations and practices.

ARTICLE 13 - CONSULTATIONS

1. The Parties undertake to consult at the request of either Party regarding the implementation of this Agreement and the development of further cooperation in the field of peaceful uses of nuclear energy on a stable, reliable and predictable basis. The Parties recognize that such consultations are between two States with advanced nuclear technology, which have agreed to assume the same responsibilities and practices and acquire the same benefits and advantages as other leading countries with advanced nuclear technology.

2. Each Party shall endeavor to avoid taking any action that adversely affects cooperation envisaged under Article 2 of this Agreement. If either Party at any time following the entry into force of this Agreement does not comply with the provisions of this Agreement, the Parties shall promptly hold consultations with a view to resolving the matter in a way that protects the legitimate interests of both Parties, it being understood that rights of either Party under Article 16.2 remain unaffected.

3. Consultations under this Article may be carried out by a Joint Committee specifically established for this purpose. A Joint Technical Working Group reporting to the Joint Committee will be set up to ensure the fulfillment of the requirements of the Administrative Arrangements referred to in Article 17.

ARTICLE 14 - TERMINATION AND CESSATION OF COOPERATION

1. Either Party shall have the right to terminate this Agreement prior to its expiration on one year's written notice to the other Party. A Party giving notice of termination shall provide the reasons for seeking such termination. The Agreement shall terminate one year from the date of the written notice, unless the notice has been withdrawn by the providing Party in writing prior to the date of termination.

2. Before this Agreement is terminated pursuant to paragraph 1 of this Article, the Parties shall consider the relevant circumstances and promptly hold consultations, as provided in Article 13, to address the reasons cited by the Party seeking termination. The Party seeking termination has the right to cease further cooperation under this Agreement if it determines that a mutually acceptable resolution of outstanding issues has not been possible or cannot be achieved through consultations. The Parties agree to consider carefully the circumstances that may lead to termination or cessation of cooperation. They further agree to take into account whether the circumstances that may lead to termination or cessation resulted from a Party's serious concern about a changed security environment or as a response to similar actions by other States which could impact national security.

3. If a Party seeking termination cites a violation of this Agreement as the reason for notice for seeking termination, the Parties shall consider whether the action was caused inadvertently or otherwise and whether the violation could be considered as material. No violation may be considered as being material unless

corresponding to the definition of material violation or breach in the Vienna Convention on the Law of Treaties. If a Party seeking termination cites a violation of an IAEA safeguards agreement as the reason for notice for seeking termination, a crucial factor will be whether the IAEA Board of Governors has made a finding of non-compliance.

4. Following the cessation of cooperation under this Agreement, either Party shall have the right to require the return by the other Party of any nuclear material, equipment, non-nuclear material or components transferred under this Agreement and any special fissionable material produced through their use. A notice by a Party that is invoking the right of return shall be delivered to the other Party on or before the date of termination of this Agreement. The notice shall contain a statement of the items subject to this Agreement as to which the Party is requesting return. Except as provided in provisions of Article 16.3, all other legal obligations pertaining to this Agreement shall cease to apply with respect to the nuclear items remaining on the territory of the Party concerned upon termination of this Agreement.

5. The two Parties recognize that exercising the right of return would have profound implications for their relations. If either Party seeks to exercise its right pursuant to paragraph 4 of this Article, it shall, prior to the removal from the territory or from the control of the other Party of any nuclear items mentioned in paragraph 4, undertake consultations with the other Party. Such consultations shall give special consideration to the importance of uninterrupted operation of nuclear reactors of the Party concerned with respect to the availability of nuclear energy for peaceful purposes as a means of achieving energy security. Both Parties shall take into account the potential negative consequences of such termination on the on-going contracts and projects initiated under this Agreement of significance for the respective nuclear programmes of either Party.

6. If either Party exercises its right of return pursuant to paragraph 4 of this Article, it shall, prior to the removal from the territory or from the control of the other Party, compensate promptly that Party for the fair market value thereof and for the costs incurred as a consequence of such removal. If the return of nuclear items is required, the Parties shall agree on methods and arrangements for the return of the items, the relevant quantity of the items to be returned, and the amount of compensation that would have to be paid by the Party exercising the right to the other Party.

7. Prior to return of nuclear items, the Parties shall satisfy themselves that full safety, radiological and physical protection measures have been ensured in accordance with their existing national regulations and that the transfers pose no unreasonable risk to either Party, countries through which the nuclear items may transit and to the global environment and are in accordance with existing international regulations.

8. The Party seeking the return of nuclear items shall ensure that the timing, methods and arrangements for return of nuclear items are in accordance with paragraphs 5, 6 and 7. Accordingly, the consultations between the Parties shall address mutual commitments as contained in Article 5.6. It is not the purpose of the provisions of this Article regarding cessation of cooperation and right of return to derogate from the rights of the Parties under Article 5.6.

9. The arrangements and procedures concluded pursuant to Article 6(iii) shall be subject to suspension by either Party in exceptional circumstances, as defined by the Parties, after consultations have been held between the Parties aimed at reaching mutually acceptable resolution of outstanding issues, while taking into account the effects of such suspension on other aspects of cooperation under this Agreement.

ARTICLE 15 - 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 16 - 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 40 years. It shall continue in force thereafter for additional periods of 10 years each. Each Party may, by giving 6 months written notice to the other Party, terminate this Agreement at the end of the initial 40 year period or at the end of any subsequent 10 year period.

3. Notwithstanding the termination or expiration of this Agreement or withdrawal of a Party from this Agreement, Articles 5.6(c), 6, 7, 8, 9, 10 and 15 shall continue in effect so long as any nuclear material, non-nuclear material, by-product 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 nuclear material is no longer usable for any nuclear activity relevant from the point of view of safeguards.

4. This Agreement shall be implemented in good faith and in accordance with the principles of international law.

5. The Parties may consult, at the request of either Party, on possible amendments to this Agreement. This Agreement may be amended if the Parties so agree. Any amendment shall enter into force on the date on which the Parties exchange diplomatic notes informing each other that their respective internal legal procedures necessary for the entry into force have been completed.

ARTICLE 17 - ADMINISTRATIVE ARRANGEMENT

1. The appropriate authorities of the Parties shall establish an Administrative Arrangement in order to provide for the effective implementation of the provisions of this Agreement.

2. The principles of fungibility and equivalence shall apply to nuclear material and non-nuclear material subject to this Agreement. Detailed provisions for applying these principles shall be set forth in the Administrative Arrangement.

3. The Administrative Arrangement established pursuant to this Article may be amended by agreement of the appropriate authorities of the Parties.

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

DONE at , this day of , 200 , in duplicate.

FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA:

FOR THE GOVERNMENT OF INDIA:

AGREED MINUTE

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

Proportionality

For the purposes of implementing the rights specified in Articles 6 and 7 of the Agreement with respect to special fissionable material and by-product material produced through the use of nuclear material and non-nuclear material, respectively, 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 fissionable material and by-product material produced that represents the ratio of transferred nuclear material and non-nuclear material, respectively, used in the production of the special fissionable material and by-product material to the total amount of nuclear material and non-nuclear material so used, and similarly for subsequent generations.

By-product material

The Parties agree that reporting and exchanges of information on by-product material subject to the Agreement will be limited to the following:

(1) Both Parties would comply with the provisions as contained in the IAEA document GOV/1999/19/Rev.2, with regard to by-product material subject to the Agreement.

(2) With regard to tritium subject to the Agreement, the Parties will exchange annually information pertaining to its disposition for peaceful purposes consistent with Article 9 of this Agreement.

FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA:

FOR THE GOVERNMENT OF INDIA:

Released on August 3, 2007

Communication received from the Permanent Mission of India concerning a document entitled "Implementation of the India-United States Joint Statement of July 18, 2005: India's Separation Plan"

[INFCIRC/731, 25 July 2008]

The Secretariat has received a communication dated 25 July 2008 from the Permanent Mission of India to the Agency, attaching a document entitled "Implementation of the India-United States Joint Statement of July 18, 2005: India's Separation Plan".

As requested by the Permanent Mission of India to the Agency, the communication and its attachment are herewith circulated for information.

25th July 2008

The Permanent Mission of India in Vienna presents its compliments to the Director-General of the International Atomic Energy Agency (IAEA) and has the honour to enclose a document entitled "Implementation of the India-United States Joint Statement of July 18, 2005: India's Separation Plan".

It is the Government of India's intention to move forward in accordance with the provisions of the "Agreement between the Government of India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities" reproduces as an attachment to the agenda item GOV/2008/30 dated 9 July 2008, after its entry into force.

The Permanent Mission of India in Vienna requests the Agency to distribute this letter along with the enclosed document to all member-States of the Agency for information.

The Permanent Mission of India in Vienna avails itself of this opportunity to renew to the International Atomic Energy Agency the assurances of its highest consideration.

[Kind Attn: H.E. Dr. Mohamed ElBaradei, Director General]

Attachment:

Implementation of the India-United States joint Statement of July 18, 2005: India's Separation Plan

The resumption of full civilian, nuclear energy cooperation between India and the United States, arose in the context of India's requirement for adequate and affordable energy supplies to sustain its accelerating economic growth rate and as recognition of its growing technological prowess. It was preceded by discussions between the two governments, particularly between President Bush and Prime Minister Manmohan Singh of the global energy scenario and the long-term implications of increasing pressure on hydrocarbon resources, and rising oil prices. These developments led to the announcement in April 2005 of an Indo-U.S Energy Dialogue that encompassed the entire spectrum of energy options ranging from oil and gas to coal, alternative fuels and civilian nuclear energy. Through the initiation of a sustained dialogue to address energy security concerns, the two countries sought to promote stable, efficient, predictable and cost effective solutions for India's growing requirements. At the same time, they also agreed on the need to develop and deploy cleaner, more efficient, affordable and diversified energy technologies to deal with the environmental implications of energy consumption. India had developed proven and wide ranging capabilities in the nuclear sector, including over the entire nuclear fuel cycle. It is internationally recognized that India has unique contributions to make to international efforts towards meeting these objectives. India has become a full partner in ITER, with the full support of the US and other partners. India also accepted the US invitation to join the initiative on Clean Development Partnership.

2. Noting the centrality of civilian nuclear energy to the twin challenges of energy security and safeguarding the environment, the two Governments agreed on 18 July 2005 to undertake reciprocal commitments and responsibilities that would create a

framework for the resumption of full cooperation in this field. On its part, the United States undertook to:

- Seek agreement from the Congress to adjust US laws and policies to achieve full civil nuclear energy cooperation.
- Work with friends and allies to adjust international regimes to enable full civil nuclear energy cooperation and trade with India, including but not limited to expeditious consideration of fuel supplies for safeguarded nuclear reactors at Tarapur.
- In the meantime, encourage its partners to consider fuel supply to Tapur expeditiously
- To consult with its partners to consider India's participation ITER.
- To consult with other participants in the Generation IV International Forum with a view towards India's inclusion.

3. India had conveyed its readiness to assume the same responsibilities and practices and acquire the same benefits and advantages as other leading countries with advanced nuclear technology, such as the United States. Accordingly, India for its part undertook the following commitments:

- Identifying and separating civilian and military nuclear facilities and programmes in a phased manner.
- Filing a declaration regarding its civilian facilities with the IAEA.
- Taking a decision to place voluntarily its civilian nuclear facilities under IAEA safeguards, and
- Signing and adhering to an Additional protocol respect to civilian nuclear facilities.

4. Other commitments undertaken by India have already been fulfilled in the last year. Among them are:

- India's responsible non-proliferation record, recognized by the US, continues and is reflected in its policies and actions.
- The harmonization of India's export controls with NSG and MTCR Guidelines even though India is not a member of either group. These guidelines and control lists have been notified and are being implemented.
- A significant upgrading of India's non-proliferation regulations export controls has taken place as a result of Weapons of Mass Destruction Act of May 2005. Inter-Ministerial consultations are ongoing to examine and amend other relevant Acts as well as framing appropriate rules and regulations.
- Refrain from transfer of enrichment and reprocessing technologies to states that do not have them and supporting international efforts to limit their spread. This has guided our policy on non-proliferation.
- Continued unilateral moratorium on nuclear testing, and
- Willingness to work with the United States for the conclusion of a multilateral Fissile Material Cut-Off Treaty.

5. The Joint Statement of 18 July 2005, recognized that India is ready to assume the same responsibilities and practices as other leading countries with advanced nuclear technology, such as the United States. India has an impeccable record in nonproliferation. The Joint Statement acknowledges that India's nuclear programme has both a military and a civilian component. Both sides had agreed that the purpose was not to constrain India's strategic programme but to enable resumption of full civil nuclear energy cooperation in order to enhance global energy and environmental security. Such cooperation was predicated on the assumption that any international civil nuclear energy cooperation (including by the US) offered to India in the civilian sector should, firstly, not be diverted away from India to third countries without safeguards. These concepts will be reflected in the Safeguards Agreement to be negotiated by India with IAEA.

6. India's nuclear programme is unique as it is the only state with nuclear weapons not to have begun with a dedicated military programme. It must be appreciated that the strategic programme is an offshoot of research on nuclear power programme and consequently, it is embedded in a larger undifferentiated programme. Identification of purely civilian facilities and programmes that have no strategic implications poses a particular challenge. Therefore, facilities identified as civilian in the Separation Plan will be offered for safeguards in phases to be decided by India. The nature of the facility concerned, the activities undertaken in it, the national security significance of materials and the location of the facilities are factors taken into account in undertaking the

separation process. This is solely an Indian determination.

7. The nuclear establishment in India not only built nuclear reactors but promoted the growth of a national industrial infrastructure. Nuclear power generation was envisaged as a three-stage programme with PHWRs chosen for deployment in the first stage. As indigenous reactors were set up, several innovative design improvements were carried out based on Indian R&D and a standardized design was evolved. The research and development spanned the entire spectrum of the nuclear fuel cycle including the front end and the back end. Success in the technologies for the back end of the fuel cycle allowed us to launch the second stage of the programme by constructing a Fast Breeder Test Reactor. This reactor has operated for 20 years based on a unique carbide fuel and has achieved all technology objectives. We have now proceeded further and are constructing a 500 MWe Prototype Fast Breeder Reactor. Simultaneously, we have launched design and development of reactors aimed at thorium utilization and incorporating inherent safety features.

8. Concepts such as grid connectivity are not relevant to the separation exercise. Issues related to fuel resource sustainability, technical design and economic viability, as well as smooth operation of reactors are relevant factors. This would necessitate grid connectivity irrespective of whether the reactor concerned is civilian or not civilian.

9. It must be recognized that the Indian nuclear programme still has a relatively narrow base and cannot be expected to adopt solutions that might be deemed viable by much larger programmes. A comparison of the number of reactors and the total installed capacity between India and the P-5 brings this out graphically:

| Country | Num of Reactors | Total Installed Capacity |
|---------|-----------------------|---|
| India | 15 | 3.04 GWe (2.8% of the total production) |
| USA | 104 (103 operational) | 99.21 GWe (19.9% of the total production) |
| France | 59 | 63.36 GWe (78.1% of the total production) |
| UK | 23 | 11.85 GWe (19.4% of the total production) |
| Russia | 31 | 21.74 GWe (15.6% of the total production) |
| China | 9 | 6.602 GWe (2.2% of the total production) |

Source: Nuclear Energy Institute, Washington DC

10. Another factor to be taken into account is the small capacity of the reactors produced indigenously by India, some of which would remain outside safeguards. Therefore, in assessing the extent of safeguards coverage, it would be important to look at both the number of reactors and the percentage of installed capacity covered. An average Indian reactor is of 220 MW and its output is significantly smaller than the standard reactor in a P-5 economy. The chart below illustrates, this aspect:

| Country | Most Common Reactor | Number of such reactors |
|---------|---|---|
| India | PHWRs 220 MWe | 12 |
| USA | 69 PWRs and 34 BWRs | Most plants are in the range of 1000-1250 MWe. 51 Reactors in the range of 1000 MWe to 1250 MWe |
| France | PWRs of 900 MWe and 1300 MWe size | 34 PWRs of 900 MWe and 20 PWRs of 1300 MWe |
| UK | No standard size. AGR is the most common in the range 600-700 MWe | 14 AGRs |
| Russia | 3 rd generation VVER-1000 PWRs and RBMK 1000 Light Water Graphite Reactors | 9 third Generation VVER1000 PWRs and 11 RBMK 1000 Light Water Graphite Reactors |
| China | PWRs 984 MWe | Four |

Source: Uranium Information Centre, Melbourne

11. The complexity of the separation process is further enhanced by the limited resources that India has devoted to its, nuclear programme as compared to P-5 nations. Moreover, as India expands international cooperation, the percentage of its thermal power reactor installed capacity under safeguards would rise

significantly as fresh capacity, is added through such, cooperation

12. India's approach to the separation civilian nuclear facilities is guided by the following principles:

- Credible, feasible, and implementable in a transparent manner;
- Consistent with the understandings of the 18 July Statement;
- Consistent with India's national security and R&D requirements as well as not prejudicial to the three-stage nuclear programme in India;
- Must be cost effective in its implementation; and
- Must be acceptable to Parliament and public opinion.

13. Based on these principles, India will:

- Include in the civilian list only those facilities offered for safeguards that, after separation, will no longer be engaged in activities of strategic significance.
- The overarching criterion would be a judgement whether subjecting a facility to IAEA safeguards would impact adversely on India's national security.
- However, a facility will be excluded from the civilian list if it is located in a larger hub of strategic significance, notwithstanding the fact that it may not be normally engaged in activities of strategic significance.
- A civilian facility would, therefore, be one that India has determined not to be relevant to its strategic, programme.

14. Taking the above into account, India, on the basis of reciprocal actions by the US, will adopt the following, approach:

i) **Thermal Power Reactors:** India will identify and offer for safeguards 14 thermal power reactors between 2006 and 2014. This will include the 4 presently safeguarded reactors (TAPS 1&2, RAPS 1&2) and in addition KK 1&2, that are under construction. 8 other PHWRs, each of a capacity of 220MWe, will be offered. The overall plan will be as follows:

| S.No. | Facility | Year offered for safeguards |
|-------|----------|-----------------------------|
| 1. | TAPS 1 | 2006 |
| 2. | TAPS 2 | 2006 |
| 3. | RAPS 1 | 2006 |
| 4. | RAPS 2 | 2006 |
| 5. | KK 1 | 2006 |
| 6. | KK 2 | 2006 |
| 7. | RAPS 5 | 2007 |
| 8. | RAPS 6 | 2008 |
| 9. | RAPS 3 | 2010 |
| 10. | RAPS 4 | 2010 |
| 11. | KAPS 1 | 2012 |
| 12. | KAPS 2 | 2012 |
| 13. | NAPS 1 | 2014 |
| 14. | NAPS 2 | 2014 |

The above offer would, in effect, cover 14 out of the 22 thermal power reactors in operation or currently under construction to be placed under safeguards, and would raise total installed Thermal Power capacity by MWe under safeguards from the present 19% to 65% by 2014.

ii) **Fast Breeder Reactors:** India is not in a position to accept safeguards on the Prototype Fast Breeder Reactors (PFBR) and the Fast Breeder Reactor (FBTR), both located at Kalpakkam. The Fast Breeder Programme is at the R&D stage and its technology will take time to mature and reach an advanced stage of development.

iii) **Future Reactors:** India has decided to place under safeguards all future civilian thermal power reactors and civilian breeder reactors, and the Government of India retains the sole right to determine such reactors as civilian.

iv) **Research Reactors:** India will permanently shut down the CIRUS reactor, in 2010. It will also be prepared to shift the fuel core of the APSARA reactor that was purchased from France outside BARC and make the fuel core available to be placed under safeguards in 2010.

v) **Upstream facilities:** The following upstream facilities would be identified and separated as civilian:

List of specific facilities in the Nuclear Fuel Complex,

Hyderabad, which will be offered for safeguards by 2008 is give below:

- o Uranium Oxide Plant (Block A)
- o Ceramic Fuel Fabrication Plant (Palletizing) (Block A)
- o Ceramic Fuel Fabrication Plant (Assembly) (Block A)
- o Enriched Uranium Oxide Plant
- o Enriched Fuel Fabrication Plant
- o Gadolinia Facility

The Heavy Water Production plants at Thal, Tuticorin and Hazira are proposed to be designated for civilian use between 2006-2009. We do not consider these plants as relevant for safeguards purposes.

vi) **Downstream facilities:** The following downstream facilities would be identified and separated as civilian:

- o India is willing to accept safeguards in the 'campaign' mode after 2010 in respect of the Tarapur Power Reactor Fuel Reprocessing Plant.
- o The Tarapur and Rajasthan 'Away From Reactors' spent an fuel storage pools would be made available for safeguards: with appropriate phasing between 2006-2009.

vii) **Research Facilities:** India will declare the following facilities as civilian:

- a) Tata Institute of Fundamental research
- b) Variable Energy Cyclotron Centre
- c) Saha Institute of Nuclear Physics
- d) Institute for Plasma Research
- e) Institute of Mathematics Science
- f) Institute of Physics
- g) Tata Memorial Centre
- h) Board of Radiation and Isotope Technology
- i) Harish Chandra Research Institute

These facilities are safeguards-irrelevant. It is our expectation that they will play a prominent role in international cooperation.

15. Safeguards:

a) The United States has conveyed, its commitment to the reliable supply of fuel to India. Consistent with the July 18, 2005, Joint Statement, the United States has also reaffirmed its assurance to create the necessary conditions for India to have assured and full access to fuel for its reactors. As part of its implementation of the July 18, 2005, Joint Statement the United States, is committed to seeking agreement from the U.S. Congress to amend its domestic laws and to work with friends and allies to adjust the practices of the Nuclear Suppliers Group to create the necessary conditions for India to obtain full access to the international fuel market, including reliable, uninterrupted, and continual access to fuel supplies from firms in several nations.

b) to further safeguard against any disruption of fuel supplies, the United States is prepared to take the following additional steps:

- i) The United States is willing to incorporate assurances regarding fuel supply in the bilateral U.S.-India agreement on peaceful uses of nuclear energy under Section 123 the U.S. Atomic Energy Act, which would be submitted to the U.S. Congress.
- ii) The United States will join India in seeking to negotiate with the IAEA an India-specific fuel supply agreement.
- iii) The United States will support an Indian effort to develop a strategic reserve of nuclear fuel to guard against any disruption of supply over the lifetime of India's reactors.
- iv) If despite these arrangements, a disruption of fuel supplies to India occurs, the United States and India would jointly convene a group of Friendly supplier countries to include countries such as Russia, France and the United Kingdom to pursue such measures as would restore fuel supply to India.

c) In light of the above understandings with the United States, an India-specific safeguards agreement will be negotiated between India and the IAEA providing for safeguards to guard against withdrawal of safeguarded nuclear material from civilian use at any time as well as providing for corrective measures that India may take to ensure uninterrupted operation of its civilian nuclear reactors

in the event of disruption of foreign fuel supplies. Taking this into account, India will place its civilian nuclear facilities under India-specific safeguards in perpetuity and negotiate an appropriate safeguards agreement to this end with the IAEA.

16. This plan is in conformity with the commitments made to Parliament by the Government.

(Tabled in Parliament on May 11, 2006)

Extract from Introductory Statement to the Board of Governors - Draft Safeguards Agreement with India

[1 August 2008, Vienna]

I am pleased to put before you the draft *Agreement with the Government of India for the Application of Safeguards to Civilian Nuclear Facilities*. As the Secretariat has already provided an extensive briefing on this, I will emphasize just a few points.

The text before you is an INFCIRC/66-type safeguards agreement based on the Agency's standard safeguards practices and procedures. These 66-type agreements are not comprehensive or full-scope safeguards agreements. They are concluded in accordance with Article III.A.5 of the Agency's Statute and provide for the application of safeguards to specific facilities or other relevant items. In the case of the draft before you, it is an "umbrella agreement", which provides for any facility notified by India to the Agency in the future to become subject to safeguards. The draft also envisages the possibility of applying current Agency safeguards in India under this new agreement by suspending, subject to agreement by the relevant parties, the application of safeguards under existing agreements. The "umbrella" nature of this agreement provides a more efficient mechanism for ensuring that safeguards requirements can be met. It satisfies India's needs while maintaining all the Agency's legal requirements. Such an "umbrella" approach could also be used for the conclusion of other 66-type safeguards agreements. As you can see from *India's Plan*, which has been circulated for the information of all IAEA Member States, a total of 14 reactors are envisaged to come under Agency safeguards by 2014. I should note that the Agency already applies safeguards to six of these 14 reactors under existing 66 type agreements with India. We expect to start implementing the agreement at new facilities in 2009. Facilities will be notified by India to the Agency in stages and the Secretariat will keep you informed when facilities are submitted for safeguards.

As with other safeguards agreements between the Agency and Member States, the agreement is of indefinite duration. There are no conditions for the discontinuation of safeguards other than those provided by the safeguards agreement itself. The termination provisions contained in the agreement are the same as for other 66-type agreements. Naturally - as with all safeguards agreements - this agreement is subject to the general rules of international law. Therefore, the agreement should be read as an integral whole. The preamble provides for contextual background and safeguards are implemented in accordance with the terms of the agreement.

Finally, I should note that India and the IAEA have already begun discussions on an additional protocol to the draft safeguards agreement.

Communication Received from the Permanent Mission of Germany Regarding a "Statement on Civil Nuclear Cooperation with India"

[Reproduced from INFCIRC/734 (Corrected)
19 September 2008]

Statement on Civil Nuclear Cooperation with India

1. At the Extraordinary Plenary Meeting on 6 September 2008, the Participating Governments of the Nuclear suppliers Group decided that they:

- a. Desire to contribute to the effectiveness and integrity of the global non-proliferation regime, and to the widest possible implementation of the provisions and objectives of the Treaty on the Non-Proliferation of Nuclear Weapons;
- b. Seek to avert the further spread of nuclear weapons;
- c. Wish to pursue mechanisms to affect positively the nonproliferation commitments and actions of all states;

- d. Seek to promote fundamental principles of safeguards and export controls for nuclear transfers for peaceful purposes; and
e. Note the energy needs of India.
2. Participating Governments have taken note of steps that India has voluntarily taken with respect to the following commitments and actions:
- Deciding to separate civilian nuclear facilities in a phased manner and to file a declaration regarding its civilian nuclear facilities with the IAEA, in accordance with its Separation Plan (circulated as INFCIRC/731);
 - Concluding negotiations with the IAEA and obtaining approval by the Board of Governors on 1 August 2008 for an "Agreement between the Government of India and the IAEA for the Application of Safeguards to Civilian Nuclear Facilities," in accordance with IAEA standards, principles, and practices (including IAEA Board of Governors, Document GOV/1621);
 - Committing to sign and adhere to an Additional Protocol with respect to India's civil nuclear facilities;
 - Refraining, from transfer of enrichment and reprocessing technologies to states that do not have them and supporting international efforts to limit their spread;
 - Instituting a national export control system capable effectively controlling transfers of multilaterally controlled nuclear and nuclear-related material, equipment and technology;
 - Harmonizing its export control lists and guidelines with those of the Nuclear Suppliers Group and committing to adhere to the Nuclear Suppliers Group Guidelines; and
 - Continuing its unilateral moratorium on nuclear testing, and its readiness to work with others towards the conclusion of a multilateral Fissile Material Cutoff Treaty.

3. Based on the commitments and actions mentioned above, as reiterated by India on September 5, 2008, and without prejudice to national positions thereon

Participating governments have adopted and will implement the following policy on civil nuclear cooperation by Participating Governments, with the IAEA-safeguarded Indian civil nuclear program:

- Notwithstanding paragraphs 4(a),4(b) and 4(c) of INFCIRC/254/Rev.9/Part 1, Participating Governments may transfer trigger list items and/or related technology to India for peaceful purposes and for use in IAEA safeguarded civil nuclear facilities, provided that the transfer satisfies all outer provisions of INFCIRC/254/Part 1, as revised, and provided that transfers of sensitive exports remain subject to paragraphs

6 and 7 of the Guidelines.

b. Notwithstanding paragraphs 4(a) and 4(b) of INFCIRC/154/Rev.7/part 2, Participating Governments may transfer nuclear-related dual-use equipment, materials, software, and related technology to India for peaceful purposes and for use in IAEA safeguarded civil nuclear facilities, provided that the transfer satisfies all other provisions of INFCIRC/254/Part 2, as revised.

c. At each Plenary, Participating Governments shall notify each other of approved transfers to India of Annex A and B items listed in INFCIRC/254/Part 1, as revised. Participating Governments are also invited to exchange information, including about their own bilateral agreements with India.

d. With a view to intensification of dialogue and cooperation with India, Chairman is requested to confer and consult with India and keep Plenary informed of these consultations.

e. Participating Governments will maintain contact and consult through regular channels, including the Consultative Group and Plenary, for the purpose of considering matters connected with the implementation of all aspects of this Statement taking into account relevant international commitments or bilateral agreements with India. In the event that one or more Participating Governments consider that circumstances have arisen which require consultations, Participating Governments will meet, and then act in accordance with paragraph 16 of the Guidelines.

4. In order to facilitate India's adherence to INFCIRC/254/Parts 1 and 2 and to remain current in its implementation of the Guidelines, the NSG Chair is requested to consult with India regarding changes to and implementation of the Guidelines and inform the Plenary of the outcome of the dialogue with India. Consultations with India regarding proposed amendments will facilitate their effective implementation by India.

5. Upon request by Participating Governments, the Chairman is requested to submit this statement to the IAEA Director General with a request that it be circulated to all Member States.

Communication of 1 October 2009 received from the Resident Representative of Hungary to the Agency on behalf of the Participating Governments of the Nuclear Suppliers Group

[INFCIRC/539/Rev.4: 5 November 2009]

See Section M