Report Pursuant to Section 104(c) of the Hyde Act Regarding Civil Nuclear Cooperation with India

This report is submitted in accordance with Section 104(c) of the Henry J. Hyde United States-India Peaceful Atomic Energy Cooperation Act of 2006 (Public Law 109-401).

The U.S.-India Civil Nuclear Cooperation Initiative was announced in a Joint Statement by President Bush and Indian Prime Minister Manmohan Singh in Washington on July 18, 2005. On December 18, 2006, the President signed into law the Henry J. Hyde United States-India Peaceful Atomic Energy Cooperation Act of 2006 (the "Hyde Act"), to facilitate peaceful nuclear cooperation with India by authorizing the President to exempt the U.S.-India nuclear cooperation agreement and waive two provisions of the Atomic Energy Act of 1954 ("AEA") based on his determination that certain nonproliferation commitments have been met. Pursuant to Section 104(c) of the Hyde Act, the following report details the basis for the President's determinations and provides a available information on the areas listed in Section 104(c)(2).

Separation Plan and Declaration

Section 104(c)(2)(A) of the Hyde Act requires:

> *"A summary of the plan provided by India to the United States and the IAEA to separate India's civil and military nuclear facilities, materials, and programs, and the declaration made by India to the IAEA identifying India's civil facilities to be placed under IAEA safeguards, including an analysis of the credibility of such plan and declaration, together with copies of the plan and declaration."*

The Government of India first made its Separation Plan public on March 7, 2006 and tabled the Separation Plan in Parliament on May 11. On July 25, 2008, the Government of India transmitted the Separation Plan to the Director General of the IAEA to be distributed "to all Member-States of the Agency." The IAEA circulated the Separation Plan to Members as IAEA document INFCIRC/731.

The Separation Plan includes a list of facilities to be designated as civil, a general description of additional facilities to be designated civil in the future, and a description of India's rationale for civil versus military designations, including a statement that the overarching criterion would be a judgement whether subjecting a facility to IAEA safeguards would adversely impact India's national security. A copy of India's Separation Plan can be found at Tab 1. Designating a facility as civil marks it as not relevant to India's strategic nuclear program. The civil designation also ensures that after separation, these facilities will not be engaged in activities of strategic significance for India's military nuclear program. Facilities located in a larger hub of strategic significance, even if they do not normally engage in activities of strategic significance, will not be designated by India as civil. Also included in the Plan are dates specifying when each of the civil facilities are to be offered for safeguards according to a "phased" timeline.

The Separation Plan notes that "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 civil*" (emphasis added). It also clarified that the "phasing of specific thermal power reactors being offered for safeguards would be indicated separately by India." And it explicitly described the distinct steps of (1) "filing a declaration regarding its civilian facilities with the IAEA" and (2) "taking a decision to place voluntarily its civilian facilities under IAEA safeguards." (See paragraph 3 of the Separation Plan)

The United States and other potential suppliers to India have international, and in many cases domestic, legal and policy requirements to ensure that items supplied under their agreements for peaceful nuclear cooperation serve exclusively the civil sector. All reactors supplied by the United States or by India's other international partners, and nuclear material used in such reactors, will be required to be designated as "civil" and subject to IAEA safeguards in perpetuity in accordance with IAEA practices. In addition, nuclear supplier nations will not be able to engage in nuclear cooperation, including fuel supply, with India's current reactors or future indigenous reactors unless they are designated as "civil" and subject to IAEA safeguards in perpetuity.

With these conditions in mind, the Plan's civil designations cover most of India's power reactors, raising the total installed thermal power capacity under safeguards from 19% to 65% by 2014.

India identifies 14 thermal reactors as civil, which according to the March 2006 Separation Plan were scheduled to be offered for safeguards between 2006 and 2014. These include the four existing foreign-supplied reactors (TAPS-1 and -2 (the U.S.-supplied Tarapur reactors), RAPS-1 and -2) and the two foreign-supplied reactors under construction (KK-1 and -2). These also include eight indigenous PHWRs, each with a generating capacity of 220 MWe: RAPS-3, -4, -5 and -6, KAPS-1 and -2, and NAPS-1 and -2. India further notes that safeguards will be applied in a phased manner consistent with its agreement with the IAEA. Eight indigenous PHWRs (TAPS-3 and -4, MAPS-1 and -2, Kaiga-1, -2, -3 and -4) are to remain outside of safeguards.

India opted to continue unsafeguarded operations at its operating fast breeder test reactor and also to exclude its prototype fast breeder reactor from safeguards. The fast breeder program is currently at the research and development stage and will take time to reach an advanced stage of development, according to India. India seeks to ensure that it does not face any external "encumbrances" in this process, and so chooses to exclude them from safeguards at this time. India and the United States would not be able to engage in the type of nuclear fuel cycle cooperation contemplated in the U.S.-India Agreement for Peaceful Nuclear Cooperation with regard to India's breeder reactors until India declared them "civil" and placed them under safeguards.

With regard to future reactors that India may operate, India states that it will place under IAEA safeguards "all future civilian thermal power reactors and civilian breeder reactors," retaining for itself the right to designate such reactors as civilian. While India retains the right to develop indigenous facilities for either civil or military purposes in the future, the United States expects the vast majority of future nuclear program growth to occur in India's civil sector. This expectation is based on discussions with the Government of India as well as India's need to obtain the maximum benefit from international cooperation in order to meet its enduring and expanding energy requirements.

Select research reactors and facilities are also included in the Separation Plan. India will permanently shut down the CIRUS plutonium production reactor in 2010. It will also place the foreign-supplied fuel core from the APSARA reactor under safeguards that year. India has not declared as civil

the Dhruva research reactor, the Advanced Heavy Water Reactor, and activities relating to naval nuclear propulsion at Kalpakkam. India plans to declare as civil nine research facilities: the Tata Institute of Fundamental Research; the Variable Energy Cyclotron Centre; the Saha Institute of Nuclear Physics; the Institute for Plasma Research; the Institute of Mathematics Science; the Institute of Physics; the Tata Memorial Centre; the Board of Radiation and Isotope Technology; and the Harish Chandra Research Institute. India expects these civil facilities to play a "prominent role" in international cooperation. Other Indian nuclear and nuclear-related facilities—such as those in the Bhaba Atomic Research Center (BARC) or in the Indira Gandhi Center for Advanced Research (IGCAR)—were not declared as civil, presumably because they retain a military or strategic role. India has not declared as civil the Dhruva research reactor, the Advanced Heavy Water Reactor, and activities relating to naval nuclear propulsion at Kalpakkam.

The civil facilities covered under India's safeguards agreement also include all upstream and downstream facilities involved in India's civil nuclear fuel cycle. India designates as civil the following specific upstream facilities associated with the Nuclear Fuel Complex: the Uranium Oxide Plant (Block A); both the Palletizing and the Assembly Ceramic Fuel Fabrication Plants (Block A); the Enriched Uranium Oxide Plant; the Enriched Fuel Fabrication Plant; and the Gadolinia Facility. The heavy water production plants at Thal, Tuticorin, and Hazira will also be designated as civil. While India does not consider them as "relevant for safeguards purposes," at a minimum India's Additional Protocol is expected to include them. India decided not to designate for civilian uses three additional heavy water production plants, as well as other select Nuclear Fuel Complex facilities.

India plans to continue the current policy of possible "campaign-mode" safeguards with respect to downstream facilities including the Tarapur Power Reactor Fuel Reprocessing Plant (PREFRE). Moreover, both the Tarapur and Rajasthan "Away from Reactor" spent fuel storage pools will be made available for safeguards. India decided not to declare as civil its other spent fuel reprocessing facilities, as well as its indigenous uranium enrichment capability. Subsequent to India's March 2006 separation plan, the Indian government decided to pursue development of a new civil facility dedicated to reprocessing material under safeguards. Development of this facility (and agreement with the United States on arrangements and

procedures related thereto) will be required to bring into effect U.S. consent to reprocessing, pursuant to Article 6 of the Agreement.

Including upstream and downstream facilities under safeguards greatly enhances the ability to ensure that India is effectively separating its civilian and military facilities and programs, safeguarding the civil nuclear program, equipment, and materials, and that no diversion of international civil nuclear assistance is taking place to further military uses. By including both upstream and downstream facilities, India's Separation Plan covers every stage in the fuel cycle process from conversion and fuel fabrication, through the end of the nuclear fuel cycle into stages including spent fuel storage.

As a whole, the United States assesses India's plan to be credible, transparent, and defensible from a nonproliferation standpoint. When implemented, the total installed nuclear capacity under safeguards will rise from 19 percent today to 65 percent; a percentage that will increase to more than 80 percent as India further expands its civil infrastructure through foreign supply and indigenous development. Based on India's safeguards agreement with the IAEA (discussed below), appropriate safeguards will cover India's civil nuclear fuel cycle and provide strong assurances to supplier states that material and technology provided or generated through civil nuclear cooperation will not be diverted either to the military sphere or for unauthorized purposes. In addition, the total portion of India's spent fuel and plutonium stockpiles under safeguards will increase substantially over time (although the reprocessing consent in Article 6 of the U.S.-India Agreement for Peaceful Nuclear Cooperation, if and when the consent comes into effect, could increase modestly the quantity of separated civil plutonium stored in India).

With respect to India filing a declaration with the IAEA, as previously noted, on July 25, 2008, the Government of India transmitted the Separation Plan to the Director General of the IAEA to be distributed "to all Member-States of the Agency" (and the IAEA circulated the Separation Plan to Members as IAEA document INFCIRC/731). Paragraph 14 of the Separation Plan describes the "civil" elements of India's nuclear program, specifically naming the 14 reactors that will be declared "civil" and establishing a timetable for placing them under safeguards, as well as describing the treatment of other types of facilities (breeder reactors, research reactors, upstream facilities, downstream facilities, and research facilities). In a speech to the Indian Parliament on August 17, 2006, the

Prime Minister confirmed that the "civil" facilities designated in the Separation Plan would be submitted to safeguards in a phased manner. He made similar statements to the Indian Parliament on August 13, 2007, after negotiations were completed on the 123 Agreement. In addition, in introducing the India-IAEA Safeguards Agreement, the Director General of the IAEA specifically referred to the significance of the Separation Plan (which had been recently circulated within the IAEA), noting that it described the facilities envisages as coming under safeguards by 2014.

IAEA Safeguards

Section 104(c)(2)(B) of the Hyde Act requires:

> *"A summary of the agreement that has been entered into between India and the IAEA requiring the application of safeguards in accordance with IAEA practices to India's civil nuclear facilities as declared in the plan described in subparagraph (A), together with a copy of the agreement, and a description of the progress toward its full implementation"*

India and the IAEA negotiated, in early 2008, a safeguards agreement, based on INFCIRC/66, the IAEA's approved safeguards system for states not party to the Treaty on the Non-Proliferation of Nuclear Weapons. A copy of India's safeguards agreement can be found at Tab 2. On August 1, 2008, the IAEA Board of Governors approved this agreement by consensus. Thus all legal steps required prior to signature of the safeguards agreement have been concluded. In his statement to the Board of Governors on August 1, 2008 Director General El Baradei stated:

> "The text before you is an INFCIRC/66-type safeguards agreement based on the Agency's standard safeguards practices and procedures. ... 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 "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. ... 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. 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."

Specifically, paragraph 11 of the safeguards agreement describes the items subject to safeguards:

"11. The items subject to this Agreement shall be:

(a) Any facility listed in the Annex to this Agreement, as notified by India pursuant to paragraph 14(a) of this Agreement;

(b) Any nuclear material, non-nuclear material, equipment and components supplied to India which are required to be safeguarded pursuant to a bilateral or multilateral arrangement to which India is a party;

(c) Any nuclear material, including subsequent generations of special fissionable material, produced, processed or used in or by the use of a facility listed in the Annex or in or by the use of any nuclear material, non-nuclear material, equipment and components referred to in paragraph 11(b);

(d) Any nuclear material substituted in accordance with paragraph 27 or 30(d) of this Agreement for nuclear material referred to in paragraph 11(b) or 11(c) of this Agreement;

> (e) Any heavy water substituted in accordance with paragraph 32 of this Agreement for heavy water subject to this Agreement;
>
> (f) Any facility other than a facility identified in paragraph 11(a) above, or any other location in India, while producing, processing, using, fabricating or storing any nuclear material, non-nuclear material, equipment or components referred to in paragraph 11(b). (c), (d), or (e) of this Agreement, as notified by India pursuant to paragraph 14(b() of this Agreement."

Paragraph 14(a) provides that India shall "notify the Agency in writing" of its decision to offer a facility for safeguards, after which that facility is included on the Annex to the safeguards agreement. This step of "notifying" the Agency of a facility offered for safeguards will be preceded by India's filing a "declaration" of civil facilities to be placed under safeguards in a phased manner; this filing will occur upon entry into force of the safeguards agreement.

Once a facility is listed in the Annex, safeguards will continue indefinitely unless "India and the Agency have jointly determined that the facility is no longer usable for any nuclear activity relevant from the point of view of safeguards" (paragraph 32). While there are a number of conditions for the termination of safeguards on materials (e.g., material is diluted to the point where it is no longer usable), these termination conditions, as noted by the El Baradei statement, are in accordance with standard IAEA practices, including INFICIRC/66. Thus, the facilities and materials subject to safeguards as described by paragraph 11 (a)-(c) are under "safeguards in perpetuity in accordance with IAEA standards, principles, and practices."

India has indicated that it will submit facilities to safeguards under the India-IAEA safeguards agreement "as declared in" the Indian Separation Plan. As noted by the IAEA Director General, the "umbrella"-type safeguards agreement is well-suited for placing the facilities identified in the Separation Plan under safeguards in a phased manner. In addition, it is well-suited to adding future indigenous reactors that India may construct for civil purposes, as well as reactors that India may import from international suppliers.

Full implementation of the India-IAEA safeguards agreement will require signature of the agreement by both the IAEA and India. The agreement will enter into force once India informs the IAEA that India's domestic legal requirements for entry into force have been met. The Government of India's cover letter transmitting the Separation Plan to the IAEA contained a statement of its "intention to move forward in accordance with the provisions of the Safeguards Agreement after its entry into force." In the meantime, Indian discussions with the IAEA on implementation of the safeguards agreement are ongoing.

IAEA Additional Protocol

Section 104(c)(2c) of the Hyde Act requires:

> *"A summary of the progress made toward conclusion and implementation of an Additional Protocol between India and the IAEA, including a description of the scope of such Additional Protocol."*

To further strengthen safeguards on India's civil nuclear facilities, consistent with its July 2005 Joint Statement commitment, India is in discussions and working closely with the IAEA to conclude an Additional Protocol that would give the IAEA expanded rights of access and additional information regarding India's civil nuclear facilities, including information on exports and imports of trigger list items. These activities, as well as others required to be reported and made available for access under an Additional Protocol, would not otherwise be subject to safeguards. Entry into force of an India-IAEA Additional Protocol could, therefore, provide even more transparency into India's civil nuclear activities.

Indian External Affairs Minister Pranab Mukherjee noted in his statement of September 5, 2008 that India was "working closely with the IAEA to ensure early conclusion of an Additional Protocol to the Safeguards Agreement." Indian officials have conveyed a letter to IAEA counterparts outlining the contours of a proposed Protocol, and the IAEA is currently reviewing India's proposal. The details included in this letter as well as substantive discussions between Indian officials and the IAEA prompted IAEA Director General Mohammed ElBaradei to conclude on September 10, 2008 that India has made substantial progress toward concluding an Additional Protocol consistent with IAEA principles, practices, and policies

that would apply to India's civil nuclear program. We look forward to conclusion of this Additional Protocol at an early date.

Fissile Material Cut-Off Treaty

Section 104(c)(2)(D) of the Hyde Act requires:

> *"A description of the steps that India is taking to work with the United States for the conclusion of a multilateral treaty banning the production of fissile material for nuclear weapons, including a description of the steps that the United States has taken and will take to encourage India to identify and declare a date by which India would be willing to stop production of fissile material for nuclear weapons unilaterally or pursuant to a multilateral moratorium or treaty."*

In August 2006, Indian Prime Minister Singh told the Indian Parliament that India was willing to join a "non-discriminatory, multilaterally-negotiated and internationally verifiable FMCT... provided its security interests are fully addressed." Following this statement, India has publicly endorsed the negotiation of an FMCT in the Conference on Disarmament (CD) and has worked with the U.S. and its international partners to commence FMCT negotiations in that forum. In a 2007 session of the CD, although India initially posed procedural objections to the proposed Program of Work, which included among other items negotiations on an FMCT, India later dropped this objection and supported the measure after the U.S. decided to join consensus support of the Program. In a 2008 session of the CD, India was also supportive of U.S. efforts to realize an effective Program of Work for the CD; India made several constructive suggestions that were incorporated into the draft program of work presented in that session (CD/1840).

Despite the cooperative working relationship between the U.S., India, and some other countries in the CD, obstacles remain in securing consensus on a Program of Work in the CD that includes negotiations on an FMCT. Nevertheless, the U.S., India, and other like-minded states continue to seek a way forward. The U.S. has now given its support to work plan CD/1840 as the best, albeit not ideal, option available for forward movement on the FMCT.

In the March 2008 session of the CD, India made a statement expressing support for consensus on a program of work that took into account "the interests of all stake-holders." In July 2008, India told the U.S. that it's Ambassador in Geneva would, at a July 29 CD meeting, publicly declare broad support for an FMCT and efforts to reach consensus on a work plan. At that meeting, the Indian Ambassador repeated India's support for consensus on a program of work that takes into account "the interests of all stake-holders." India followed this with a statement in an informal session on July 31, where they reiterated their long-standing support for negotiating an FMCT in the CD.

On September 5, 2008, Indian External Affairs Minister Pranab Mukherjee stated, "We are committed to work with others towards the conclusion of a multilateral Fissile Material Cut-off Treaty in the Conference on Disarmament that is universal, non-discriminatory, and verifiable."

In addition to discussions at the CD on an FMCT, the U.S. remains willing to explore other intermediate options. We continue to encourage an early end to the production of fissile material production for weapons by all states. Toward that end we have urged India as part of our bilateral dialogue to put in place a moratorium on fissile material production, as we have done. India has rejected this notion in favor of working this issue at the CD.

Preventing the Spread of Enrichment and Reprocessing Technology

Section 104(c)(2)(E) of the Hyde Act requires:

> *"A description of the steps India is taking to prevent the spread of nuclear-related technology, including enrichment and reprocessing technology or materials that can be used to acquire a nuclear weapons capability, as well as the support that India is providing to the United States to further United States objectives to restrict the spread of such technology."*

India has a solid nonproliferation record on enrichment and reprocessing (ENR) transfers; we are aware of no Indian transfers of ENR equipment or technologies to another state. India furthermore is supportive of

international efforts to limit their spread to states that do not already posses ENR.

India has been supportive of U.S. efforts to work with other states to develop incentives to encourage states without ENR not to pursue these technologies. One such effort is the IAEA fuel bank initiative. Toward that end, India sent a letter dated 18 August 2008 to IAEA Director General ElBaradei indicating India's interest in participating as a supplier nation in the IAEA's effort to establish international fuel banks. In this letter, Dr. Anil Kakodkar, Chairman of India's Atomic Energy Commission, reaffirmed that "India will refrain from the transfer of enrichment and reprocessing technologies to States that do not have them, and support international efforts to limit their spread."

Indian External Affairs Minister Pranab Mukherjee reiterated that in a September 5, 2008 public statement that:

> "India will not be the source of proliferation of sensitive technologies, including enrichment and reprocessing transfers. We stand for the strengthening of the non-proliferation regime. We support international efforts to limit the spread of ENR equipment or technologies to states that do not have them. We will work together with the international community to advance our common objective of non-proliferation. In this regard, India is interested in participating as a supplier nation, particularly for Thorium-based fuel and in establishment of international fuel banks, which also benefit India."

Export Controls

Section 104(c)(2)(F) of the Hyde Act requires:

> *"A description of the steps that India is taking to secure materials and technology applicable for the development, acquisition, or manufacture of weapons of mass destruction and the means to deliver such weapons through the application of comprehensive export control legislation and regulations, and through harmonization with and adherence to MTCR, NSG, Australia Group, and Wassenaar Arrangement guidelines, compliance with United Nations Security Council Resolution 1540, and participation in the Proliferation Security Initiative"*

India committed under the July 18, 2005 Joint Statement, which launched the Civil Nuclear Cooperation Initiative, to harmonize its export controls with and unilaterally adhere to the Missile Technology Control Regime (MTCR) and NSG Guidelines. Through our various discussions since then, India has assured the United States that it has taken the necessary steps to have in place and fully implement effective and comprehensive export controls to deny unlawful access by states or non-state actors. Moreover, India has given assurances of a high-level political commitment to this effort.

India's June 2005 "Weapons of Mass Destruction (WMD) and their Delivery Systems (Prohibitions of Unlawful Activities) Act" and subsequent implementing regulations bring Indian export controls further in line with widely accepted export control standards for preventing WMD proliferation and are consistent with the kinds of measures that UN Security Council Resolution 1540 requires states to implement. The WMD Act, with its stronger "catch-all" provisions, considerably strengthens the government's regulatory ability to control transfers of otherwise uncontrolled items that could contribute to a WMD or missile program of concern.

To assist India in strengthening its export control system, the U.S. held two rounds of experts-level export control talks with India (October 15-16, 2007 and August 11-12, 2008). During these talks, the U.S. gained greater understanding of India's export control laws and regulations, their history, its Special Chemicals, Organisms, Materials, Equipment, and Technologies (SCOMET) list, and how its controls are implemented and enforced. As a result of our engagement with India on its export control system, India not only provided greater clarity on that system but also took specific steps such as issuing a revised SCOMET notification on September 7, 2007.

With respect to harmonization with the NSG and MTCR, in addition to issuing the revision to the SCOMET list in 2007, India explained how the Government of India sometimes uses broader terms than is utilized in the NSG or MTCR; this is done so as to exercise greater licensing oversight. India further explained that there are no substantial differences between its guidelines and those of the NSG and that the only linguistic differences flow from India's nonparticipation in the NSG. The U.S. assesses that India has harmonized with the MTCR and with the NSG up through the 2005 revisions, and has the means in place to make future updates to its guidelines

and control lists if it chooses to do so. Furthermore, India's SCOMET list already captures some of the follow-on updates to the MTCR. We understand that this harmonization process will continue as an element of India's unilateral adherence to the NSG and MTCR. The Government of India has assured us that it has in place a process to make changes to the SCOMET list. Ongoing review and strengthening of India's export controls is built into the Indian system through regular inter-ministerial working groups as well as the Advisory Committees set up in November 2006 under the WMD Act of 2005.

India stated its adherence to the NSG and its annexes in a letter dated September 8, 2008, to Dr. Mohammed El Baradei, the Director General of the International Atomic Energy Agency. Likewise, India stated its adherence to the MTCR and its annex in a letter dated September, 9, 2008, to Mr. Jacques Audibert, the MTCR Point of Contact in Paris. Taking into account these statements, the U.S. assesses that India has adhered to the guidelines and annexes of the NSG and the MTCR, and has done so in a manner consistent with the procedures and/or practices of those regimes.

As part of our strategic partnership, and in the course of a variety of dialogues, including annual nonproliferation talks, we discuss with India a wide range of nonproliferation and export control-related issues, including harmonization with and adherence to the Australia Group (AG) and Wassenaar Arrangement (WA), endorsement of the Proliferation Security Initiative, and implementation of UN Security Council Resolution 1540. We have discussed areas of differences between the SCOMET list and the AG as well as the process of adherence. With respect to the WA, India is in the process of developing a munitions list, and has welcomed outreach by the WA Chair. Discussions with India regarding PSI are ongoing. Since October 2007, India has attended as observers three PSI exercises and the PSI Fifth Anniversary Workshop for non-PSI partners. With respect to UNSCR 1540, India has submitted to the Committee established by UN Security Council Resolution 1540 its initial report as well as two subsequent reports on steps it has taken to meet its UN Security Council Resolution 1540 obligations, and continues to support the Committee's work.

Dissuading Iran from Acquiring WMD

Section 104(c)(2)(G) of the Hyde Act requires:

"A description and assessment of the specific measures that India has taken to fully and actively participate in United States and international efforts to dissuade, isolate, and, if necessary, sanction and contain Iran for its efforts to acquire weapons of mass destruction, including a nuclear weapons capability and the capability to enrich uranium or reprocess nuclear fuel and the means to deliver weapons of mass destruction."

The Government of India has taken several steps to support the U.S. in this regard and to bring Iran back into compliance with its international obligations, particularly those pertaining to its nuclear weapons program. As a member of the IAEA Board of Governors, India voted in favor of both the resolution that found Iran in noncompliance with its IAEA Safeguards Agreement in September 2005 and the resolution that reported Iran's noncompliance to the UN Security Council in February 2006. Responding to the adoption of three Chapter VII UN Security Council Resolutions (1737 in 2006, 1747 in 2007, and 183 in 2008), India reported that it is fully implementing their provisions, including those related to preventing Iran's acquisition of sensitive technology that could facilitate its uranium enrichment program or any future action to reprocess spent fuel.

India has also maintained a strong public line of support for P5+1 and U.S. diplomatic efforts to resolve international concerns with Iran's nuclear program. Furthermore, India has stressed that it does not favor the emergence of additional nuclear weapons states in the region and that all states must adhere to commitments under international treaties and be transparent in fulfilling these commitments. In this vein, India has called on Iran to cooperate fully with the IAEA on numerous occasions and delivered the same message to the Iranians during bilateral consultations.

Nuclear Suppliers Group Exception

Section 104(c)(2)(H) of the Hyde Act requires:

"A description of the decision of the NSG relating to nuclear cooperation with India, including whether nuclear cooperation by the United States under an agreement for cooperation arranged pursuant to section 123 of the Atomic Energy Act of

1954 (42 U.S.C. 2153) is consistent with the decision, practices, and policies of the NSG.

On September 6, 2008, the Nuclear Suppliers Group approved a policy statement by consensus excepting India from the Group's full-scope safeguards requirement for civil nuclear trade. This decision was made at the second of two Extraordinary Plenary sessions held August 21-22 and September 4-6, 2008. This historic decision by the NSG strengthens global nonproliferation principles while assisting India to meet its energy requirements in an environmentally friendly manner.

This exception involved intense scrutiny and debate by and among participating governments. On September 5, 2008, Indian External Affairs Minister (EAM) Pranab Mukherjee issued the following statement on the Civil Nuclear Cooperation Initiative, which was helpful in garnering additional momentum towards consensus:

Statement by External Affairs Minister of India
Shri Pranab Mukherjee on the Civil Nuclear Initiative
05 September 2008

To reiterate India's stand on disarmament and nonproliferation, EAM has made the following statement:

A Plenary meeting of the Nuclear Suppliers Group to consider an exception for India from its guidelines to allow for full civil nuclear cooperation with India is being held in Vienna from September 4 – 5, 2008.

India has a long-standing and steadfast commitment to universal, non-discriminatory and total elimination of nuclear weapons. The vision of a world free of nuclear weapons which Shri Rajiv Gandhi put before the UN in 1988 still has universal resonance.

We approach our dialogue with the Nuclear Suppliers Group and all its members in a spirit of cooperation that allows for an ongoing frank exchange of views on subjects of mutual interest and concern. Such a dialogue will strengthen our relationship in the years to come.

Our civil nuclear initiative will strengthen the international non-

proliferation regime. India believes that the opening of full civil nuclear cooperation will be good for India and for the world. It will have a profound positive impact on global energy security and international efforts to combat climate change.

India has recently submitted a Working Paper on Nuclear Disarmament to the UN General Assembly, containing initiatives on nuclear disarmament. These include the reaffirmation of the unequivocal commitment of all nuclear weapon States to the goal of complete elimination of nuclear weapons; negotiation of a Convention on the complete prohibition of the use or threat of use of nuclear weapons; and negotiation of a Nuclear Weapons Convention prohibiting the development, production, stockpiling and use of nuclear weapons and on their destruction, leading to the global, non-discriminatory and verifiable elimination of nuclear weapons within a specified timeframe.

We remain committed to a voluntary, unilateral moratorium on nuclear testing. We do not subscribe to any arms race, including a nuclear arms race. We have always tempered the exercise of our strategic autonomy with a sense of global responsibility. We affirm our policy of no-first-use of nuclear weapons.

We are committed to work with others towards the conclusion of a multilateral Fissile Material Cut-off Treaty in the Conference on Disarmament that is universal, non-discriminatory and verifiable.

India has an impeccable non-proliferation record. We have in place an effective and comprehensive system of national export controls, which has been constantly updated to meet the highest international standards. This is manifested in the enactment of the Weapons of Mass Destruction and their Delivery Systems Act in 2005. India has taken the necessary steps to secure nuclear materials and technology through comprehensive export control legislation and through harmonization and committing to adhere to Missile Technology Control Regime and Nuclear Suppliers Group guidelines.

India will not be the source of proliferation of sensitive technologies, including enrichment and reprocessing transfers. We stand for the strengthening of the non-proliferation regime. We support international efforts to limit the spread of ENR equipment or technologies to states that

do not have them. We will work together with the international community to advance our common objective of non-proliferation. In this regard, India is interested in participating as a supplier nation, particularly for Thorium-based fuel and in establishment of international fuel banks, which also benefit India.

India places great value on the role played by the IAEA's nuclear safeguards system. We look forward to working with the IAEA in implementing the India-specific Safeguards Agreement concluded with the IAEA. In keeping with our commitment to sign and adhere to an Additional Protocol with respect to India's civil nuclear facilities, we are working closely with the IAEA to ensure early conclusion of an Additional Protocol to the Safeguards Agreement.

New Delhi
5th September 2008

With these assurances reaffirmed, NSG Participating Governments agreed by consensus on an exception for India on September 6, 2008. This decision is consistent with the cooperation envisioned under the U.S.-India peaceful nuclear cooperation agreement detailed below as well as with NSG practices and policies. This policy decision:

- exempts India from the NSG's full-scope safeguards requirement as a condition for transfer of Trigger List items for peaceful purposes and for use in IAEA safeguarded civil nuclear facilities, provided that the transfer satisfies all other provisions of the NSG Guidelines.

- contains an information exchange clause, which is consistent with current practice of the NSG.

- calls for intensified dialogue between the NSG Chair and India; this dialogue already exists. It is useful for it to be intensified not only as part of this decision, but also given India's decision to adhere to the NSG, which involves remaining abreast of and in line with changes to the NSG list and guidelines.

- addresses the desire expressed by some Participating Governments for an explicit review mechanism and/or for the ability to respond in the

event that India abrogates its commitments, such as a nuclear explosive test or safeguards violation. This ability to consult in response to some problem is already provided for under Paragraph 16 of the Guidelines; any participating government may exercise this ability if they consider circumstances warrant.

- notes that Participating Governments will maintain contact and consult through regular channels to "consider" matters related to this decision consistent with the NSG's existing authority and practice.

- provides for enhanced outreach between India and the NSG Chair following this decision and in light of India's decision to adhere to the NSG. This is consistent with enhanced outreach that we support with all adherents and is especially important in light of the civil nuclear trade with India to result from the NSG's decision.

Envisioned Scope of U.S.-India Peaceful Nuclear Cooperation

Section 104(c)(2i)

> *"A description of the scope of peaceful cooperation envisioned by the United States and India that will be implemented under the agreement for nuclear cooperation, including whether such cooperation will include the provision of enrichment and reprocessing technology."*

Envisioned civil nuclear cooperation with India will include a number of activities, which are described in general terms in the *Proposed Agreement for Cooperation Between the Government of the United States of America and the Government of India Concerning Peaceful Uses of Nuclear Energy* Article 2(2). These activities are to take place in accordance with the provisions of the Agreement and each Party's applicable treaties, national laws, regulations, and license requirements and may include, but are not limited to, the following areas:

- Advanced nuclear energy research and development in areas agreed to by the Parties;
- Nuclear safety matters;

- Facilitation of exchange of scientists for visits, meetings, symposia and collaborative research;
- 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;
- Development of a strategic reserve to guard against any disruption of supply over the lifetime of India's reactors;
- Advanced research and development in nuclear sciences including biological research, medicine, agriculture and industry, environment and climate change;
- Supply between the Parties, whether for use by or for the benefit of the Parties or third countries, of nuclear material;
- Alteration in form or content of nuclear material as provided for in Article 6 of the Agreement;
- Supply between the Parties of equipment, whether for use by or for the benefit of the Parties or third countries;
- Controlled thermonuclear fusion including in multilateral projects; and
- Other areas of mutual interest as may be agreed by the Parties.

Article 2(3) of the Agreement specifically provides that the Parties may undertake transfers between themselves or their authorized persons of nuclear material, non-nuclear material, equipment, components and information.

In Article 2(4) of the Agreement, the U.S. and India further delimit the scope of cooperation by affirming that the purpose of the Agreement is to provide for peaceful nuclear cooperation and not to affect the unsafeguarded nuclear activities of either Party. Nothing in the Agreement is to 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 the Agreement. The Agreement is to 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 the Agreement for their own purposes.

Article 3(1) of the Agreement again specifically provides that *information* may be transferred between the Parties, and that such information may cover, but need not be limited to, the following fields:

- Research, development, design, construction, operation, maintenance and use of reactors, reactor experiments, and decommissioning;
- The use of nuclear material in physical, chemical, radiological and biological research, medicine, agriculture and industry;
- 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;
- Advanced research and development in nuclear science and technology;
- Health, safety and environmental considerations related to the foregoing;
- Assessments of the role that nuclear power may play in national energy plans;
- Codes, regulations and standards for the nuclear industry;
- Research on controlled thermonuclear fusion including bilateral activities and contributions toward multilateral projects such as the International Thermonuclear Experimental Reactor (ITER); and
- Any other field mutually agreed to by the Parties.

Article 3(2) provides that the above cooperation may include training, exchange of personnel, meetings, exchange of samples, materials and instruments for experimental purposes and a balanced participation in joint studies and projects.

Article 3(3) states that the Agreement does not require the transfer of any information outside the scope of the Agreement, or information that the Parties are not permitted under their respective treaties, national laws or regulations to transfer.

Article 3(4) provides that Restricted Data, as defined by each Party, shall not be transferred under the Agreement.

Article 4(1) provides *inter alia* for the Parties to facilitate nuclear trade between themselves in the mutual interests of their respective industry, utilities and consumers and also, where appropriate, trade between either Party and a third country of items obligated to the other Party.

Article 4(2) provides *inter alia* that 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 the Agreement and should not be used to restrict trade.

Article 5(1) provides that nuclear material, non-nuclear material, equipment and components may be transferred for applications consistent with the Agreement. However, any special fissionable material transferred shall be limited to low enriched uranium, except for "small quantities," which may be transferred pursuant to Article 5(5) for use as samples, standards, detectors and targets, and the accomplishment of other purposes as agreed by the Parties.

In considering the scope of civil nuclear cooperation with India, the issue of spreading sensitive technologies is often raised. The requirement of section 123a.(9) pertains to situations that may result when sensitive nuclear technology is transferred pursuant to a section 123 agreement for cooperation. Article 5(2) of the Agreement provides that sensitive nuclear technology shall only be transferred under the Agreement if provided for by an amendment to the Agreement, and Article 5(2) further provides that sensitive nuclear facilities and major critical components thereof shall only be transferred under the Agreement if provided for by an amendment to the Agreement. Accordingly, the requirement in section 123a.(9) is not relevant to the proposed Agreement, and the requirement in section 402(b) of the NNPA precluding the transfer of major critical components of facilities for uranium enrichment, nuclear fuel reprocessing, or heavy water production unless an agreement for cooperation "specifically designates such components as items to be exported pursuant to [such] agreement" is also satisfied.

Article 5(4) provides that the *quantity* of nuclear material transferred under the 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 other purposes as the Parties may agree.

Article 5(6) records verbatim certain political assurances relating to reliable supply of nuclear fuel given to India by the United States in March 2006. The Agreement language does not have the effect of converting these political assurances into legally binding commitments.

Articles 5(2), 6-10, and 14 address the specific requirements of section 123a. of the Atomic Energy Act of 1954 (AEA).

Article 11 provides that 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 activities under the Agreement and in related matters of health and safety.

Article 12 contains additional provisions with regard to implementation of activities falling within the scope of the Agreement.

Article 13 provides for consultations at the request of either Party regarding implementation of the Agreement and the development of further cooperation in the field of peaceful uses of nuclear energy on a stable, reliable and predictable basis. It further provides that the Parties shall endeavor to avoid taking any action that adversely affects cooperation under Article 2, which is the general "Scope of Cooperation" article.

Article 15 provides for dispute settlement through negotiations between the Parties.

Article 16 provides for the Agreement to have an initial duration of 40 years and to continue in force for additional periods of 10 years each, subject to a proviso that either Party may terminate the Agreement by giving written notice to the other Party six months prior to the close of a period. It also provides for continuation in effect of key nonproliferation provisions of the Agreement in the event of its termination.

Ensuring Cooperation Does Not in Any Way Assist India's Nuclear Weapons Program

Section 104(c)(2)(J) of the Hyde Act requires:

> *"A description of the steps taken to ensure that proposed United States civil nuclear cooperation with India will not in any way assist India's nuclear weapons program."*

As previously described, India has developed a Separation Plan (INFCIR/731) to separate civil and military nuclear facilities. The India-IAEA safeguards agreement, which was unanimously approved by the IAEA Board of Governors on August 1, 2008, establishes procedures for applying safeguards to India's "civil" nuclear facilities in accordance with IAEA standards, principles, and practices. The stated purpose of the safeguards agreement is to ensure that no safeguarded item is "used for the manufacture of any nuclear weapon or to further any other military purpose and that such items are used exclusively for peaceful purposes." To this end, IAEA safeguards are designed to detect and prevent diversion from civil to military facilities, making the conclusion of this safeguards agreement the key to ensuring that civil nuclear cooperation could not be used to advance a nuclear weapons program The U.S. does not in any way support India's nuclear weapons program.

Under the Safeguards Agreement, the IAEA will verify that all of India's current and future civil nuclear facilities and material, as well as certain upstream and downstream facilities, are used only for peaceful purposes. Once a reactor is under IAEA safeguards, those safeguards will remain in place on an unconditional basis until the reactor is jointly determined by the IAEA and India to be no longer usable for nuclear activities relevant from the point of view of safeguards. This Initiative will only allow for nuclear cooperation to proceed with facilities subject to IAEA safeguards, monitoring, and inspections to ensure that the civilian nature of the work therein is not compromised. This also provides an incentive for India to declare any future reactors as civil and thus bring them into this framework of nuclear cooperation; otherwise no foreign material and technology would be available for their construction and operation.

For dual-use nuclear exports administered by the Department of Commerce, there are several ways the U.S. is assured that exports are going to reliable recipients of U.S. origin items and have not been diverted to unauthorized end users or end uses. As part of the license application package, we require certification that the item(s) will not be used in any of

the prohibited activities described in 744.2(a) of the Export Administration Regulations (EAR). Through the licensing process, the intelligence and enforcement communities provide information on the bona fides of prospective end-users. Commerce determines the bona fides of the transaction and suitability of the end-user through the use of pre-license checks. This information is then used to make licensing decisions. As part of the approval process, export licenses normally have conditions attached that prohibit re-export, retransfer, or use in sensitive nuclear, chemical, biological, or missile end uses. We require applicants to inform end-users of the licensing conditions. In addition, the U.S. has an end use assurance letter from the Government of India that commits it to ensure that items are not transferred from or through India for use in prohibited unsafeguarded nuclear, WMD, or WMD delivery programs. Also, through post-shipment verifications, the U.S. visits recipients of U.S.-origin items to ensure that the items have actually been delivered to the authorized ultimate consignee or end-user and those items are being used as stated on the export license application.

The transfer of nuclear fuel technology requires authorization by the Secretary of Energy under Section 57(b) of the Atomic Energy Act of 1954 as amended. The regulations that implement Section 57(b) are found in 10 CFR Part 810, which require that prior to such approval, government-to-government assurances outlining the controls/conditions that will be used for securing this technology must be in place. This includes the requirement that the transfer, anything derived from the transfer, and anything that is produced or modified in a facility constructed as a result of the transfer will be used for peaceful purposes. Further, the United States places additional conditions on an authorization to transfer the technology that limits access and prohibits the retransfer of the technology.

Conclusion

As great progress has been made in bringing the U.S.-India Civil Nuclear Cooperation Initiative to fruition, India has been brought closer to the nonproliferation mainstream. India has completed a Separation Plan, negotiated a safeguards agreement, and made substantial progress towards an Additional Protocol. India has greatly improved its export controls and pledged to maintain the highest international standards on restricting the transfer of sensitive technologies. The U.S.-India bilateral relationship has been revamped and has facilitated cooperation on many key regional and

global issues, such as dissuading Iranian attempts to acquire WMD and completing an FMCT in the CD, and this close cooperation is expected to continue in the future, advancing U.S. strategic interests and increasing U.S. national security. Civil nuclear trade with India will increase global energy security and advance U.S. and Indian economic interests while at the same time strengthening the global nonproliferation regime. In meeting its nonproliferation commitments under the Hyde Act, India has made a great step forward in taking its place as a strategic partner for the U.S. now and in the future.

Attachments:

Tab 1 – India Separation Plan
Tab 2 – Agreement Between the Government of India and the IAEA for the Application of Safeguards to Civilian Nuclear Facilities