Summary of the International Issues Workshop on the role of nuclear weapons in national security policy (May 2, 2008)

Overview: From the perspective of international relations, the United States nuclear weapons policy must be sensitive to a broad global context of risks, opportunities, and public perceptions. Members of the International Workshop identified several general issues that establish a frame for US nuclear weapons policy decision-making (Section 1). Within that general frame, the participants identified four specific risks that will require the immediate attention of the next Administration (Section 2). They also identified numerous policy actions that are available to address those risks (Section 3). The resulting matrix of risks and policy options forms a complex decision space. The path one pursues in the decision space depends heavily on which risks are considered primary and which policy tools are believed to be the most effective in addressing those risks. Workshop participants raised two overarching options in the decision space (Section 4).

1. The International Context for US Nuclear Policy Decision Making

Global Nuclear Weapons Capability

Without concerted action, there could be a cascade of nuclear proliferation. At least 40 countries from the Persian Gulf to Latin America have indicated interest in starting nuclear power programs. Of those, more than a half dozen countries have stated a desire to enrich or reprocess nuclear fuel. While most of these countries have stressed their peaceful intentions, such technologies nevertheless can provide the building blocks of nuclear arsenals. The risks are compounded by the possibility that these countries may illegally transfer sensitive nuclear material and technology throughout the world.

Nuclear Material Lockdown

There are large quantities of inadequately secured nuclear material in numerous locations around the world. Nuclear security in Russia has improved dramatically since the mid-1990s, as a result of U.S. and international assistance and Russia's own

efforts. But real risks remain, from under-funding of nuclear security systems, weak nuclear security regulations, and corruption, coupled with threats ranging from surprise attack by scores of heavily armed terrorists to sophisticated insider theft conspiracies. Similar risks exist within Pakistan, India, and North Korea.

The Non Proliferation Treaty "Loophole"

The Non-Proliferation Treaty (NPT) guarantees non-nuclear weapon states the right to develop nuclear energy for peaceful purposes. Many states assert that this right encompasses the entire nuclear fuel cycle, including the uranium enrichment and reprocessing facilities needed to produce fuel for nuclear power plants. However, these sensitive facilities also enable states to rapidly produce fissile materials for nuclear weapons. This "loophole" would allow governments to advance nuclear weapons programs under the guise of civilian programs, and then after developing a nuclear weapons program, withdraw from the NPT.

The Technology Landscape

Advancements in technology can strengthen the arms-control an non-proliferation regime. For example, technology now exists to verify a Comprehensive Test Ban Treaty to a degree that would insure that no country could alter the current strategic balance in any meaningful way. In addition, the Stockpile Stewardship Program (SSP) has maintained a safe and secure US nuclear deterrent without nuclear testing, as confirmed by the annual nuclear weapon certification process. While experts have identified concerns with the arsenal, the consensus view is that there is no need for a precipitous change and that SSP is providing time to explore alternatives for maintaining the US nuclear deterrent. However, despite these significant technical achievements, there does not exist at this time the necessary technology to verify a regime for the elimination of nuclear weapons.

Public Perceptions

A recent DTRA-sponsored report summarizes current foreign views on U.S. nuclear weapons policy. It states that there is a widespread perception that the United States is placing heightened emphasis on nuclear weapons as part of its overall defense strategy, intentionally or unintentionally lowering the threshold of nuclear weapons use. This, in turn, leads to concerns among friends and allies about the possible adverse nonproliferation impacts of U.S. nuclear policy and posture. At the same time, Americans show strong support for working in conjunction with allies. The GMF Transatlantic Trends poll from June 2006 showed 91% of Americans either strongly agreeing or agreeing to a policy of global cooperation to confront the terrorist threat.

2 . Primary Risks That Must Be Addressed by the Next Administration

Iran and a Nuclear Tipping Point in the Middle East
On August 14, 2002 Iran publicly revealed that it has two nuclear sites under construction: a uranium enrichment facility in Natanz and a heavy water facility in Arak. Much of the debate about the Iranian nuclear threat is driven not so much by any hard evidence about a weapons driven program but by concern that Iran's mastery of the civilian nuclear technology would provide the means to rapidly develop a weapons capability should it wish to do so in the future. Iran's acquisition of uranium enrichment capabilities, if not appropriately restrained, could lead to an erosion of the nonproliferation regime and provoke similar developments throughout the Middle East.

North Korea
North Korea detonated a nuclear device on October 9, 2006 after having ratified the non-proliferation treaty (NPT). They represent an immediate potential nuclear weapons proliferation risk. However, if North Korea can be persuaded to forego nuclear weapons development, it would be a substantial accomplishment that can strengthen the nonproliferation regime.

The Nuclear Black-Market
Rogue nations and terrorist groups have greater access to nuclear technology and materials than ever before. Indeed, between 1993 and 2007 there were more than 1,300 incidents of illicit trafficking of nuclear materials, including plutonium and highly enriched uranium. The expansive nuclear trafficking network established by AQ Kahn that linked companies and banks in Europe, Asia and the Middle East provided high-tech equipment and financing for nuclear weapons programs in Libya, Iran and North Korea. Remnants of the Kahn network may well persist today.

Keeping Non-Nuclear Allies Non-Nuclear
If nations believe that the non-proliferation regime is preventing or constraining the spread of nuclear weapons and reducing global arsenals, then they are more likely to participate in the regime and to take some measure of risk to further additional reductions in nuclear dangers. If, however, states perceive a more dangerous, unrestrained, international security situation, they are more likely to hedge their bets, to participate partially, and even to reject regime arrangements and possibly develop their own nuclear capability. Preserving US allies' non-nuclear status at this time requires, among several factors, that the US maintain a credible deterrent in order to extend a reliable "nuclear umbrella" to allies.

3. Range of Possible Actions to Address the Risks

Scientific Cooperation as Tool for Diplomacy and Transparency

Our scientific strength is both a tool of "soft power" – part of our strategic diplomatic arsenal – and a basis for creating partnerships with countries. At the height of the cold war, scientific exchange between the US and Soviet Union served to keep the two nations informed of each others technical capabilities. In the post-Cold War era, the US scientific and engineering communities have increasingly been called upon to play important diplomatic roles in establishing international partnerships. They have facilitated important progress in such areas as counter-proliferation, weapons reduction, environmental cleanup, nuclear safety, and counter-terrorism, while helping to divert foreign military manpower toward civilian goals. Several studies of the National Academies have articulated the importance, for both U.S. and international security, of increasing scientific exchange as a mechanism for sustaining transparency in certain programs. Such openness has reinforced confidence and helped to promote the security systems that are necessary for controlling chemical, nuclear, and biological weapons.

An R&D Program to Support Treaty Verification

The monitoring of nuclear proliferation and nuclear weapons–related activities is technically demanding. Currently there is a broad array of electro-optical, infrared, and radar sensors that can track the construction of new large facilities, the levels of activity at known facilities, and also the deployment levels of strategic nuclear forces. There is also considerable technology available that can verify a CTBT to a degree that would insure that no country could alter the current strategic balance in any meaningful way. While there are technologies available to provide on-site surveillance in nuclear facilities and to detect theft or transport of nuclear material, these technologies can be significantly improved. And, a critical R&D challenge is the detection of relatively small nuclear production activities in countries that are potential proliferators. It is a considerable hurdle to go from indications that arouse suspicions to confirming that serious covert efforts toward a nuclear capability are being attempted.

International Management of the Fuel Cycle

Proliferation risks could be better managed if there were a multinational regime to facilitate production, delivery, removal, and storage of nuclear fuel for all states that abstain from national enrichment and reprocessing programs, submit to strict safeguards, and reaffirm their intention to not pursue nuclear weapons. Any approach to designing and implementing a multinational fuel cycle supply regime must overcome two major obstacles. First, the regime's success will depend on the credibility of nuclear fuel supply assurances. If potential recipient states believe that policy changes in supplier state governments might jeopardize fuel deliveries and spent fuel removal, then they will be reluctant to forego domestic enrichment and reprocessing. Second, the regime would ignite a debate about the rights of non-nuclear weapon states under the NPT.

A Nuclear Inventory
A systematic accounting of fissile materials and all nuclear weapons – including deployed, reserve and decommissioned - would be beneficial to help prevent the theft or diversion of these items. In addition, it would reassure all nations that as the US and Russia reduce their nuclear arsenals, all the materials and weapons have been accounted for, thereby reducing the risk that these items could be hidden away to reappear at a time when the global nuclear arsenal is much smaller.

Treaties & Programs
A broad range of arms-control treaties, or improvements to treaties, were discussed as means to manage proliferation risks and to demonstrate US commitment to NPT obligations. These include: No First Use, Fissile Materials Cutoff, Comprehensive Test Ban , US/Russia Reductions, De-Alerting, and Abolition. Complimenting such treaties are the existing counter proliferation programs including, for example, the Cooperative Threat Reduction program, the Global Threat Reduction Initiative, the Proliferation Security Initiative and the Additional Protocols.

4. The International Relations Decision Space for US Nuclear Weapons Policy

Workshop participants agreed that US Nuclear policy should be developed with sensitivity to current risks, opportunities and perceptions. Indeed, a comprehensive US Nuclear Policy will be a combination of nuclear arsenal maintenance, treaties, scientific research activities, and counter proliferation programs. Given this range of actions, successful implementation of nuclear policy will require a shared view from the State, Defense and Energy Departments.

There were a variety of views among the Workshop participants on which risks are primary and which actions would be the most effective at confronting those risks. There are two prevailing overarching perspectives that can motivate decisions on US nuclear weapons policy development. Those two perspectives define unique decision spaces to address the risks:

> *Abolition:*
> According to this perspective, nuclear weapons are becoming increasingly hazardous and decreasingly effective. Advocates cite Ronald Reagan's call for the abolishment of "all nuclear weapons," which he considered to be "totally irrational, totally inhumane, good for nothing but killing, possibly destructive of life on earth and civilization." Advocates such as Kissinger, Shultz, Perry and Nunn, believe that reasserting this call for abolition is a means to confronting the pressing risks identified in Section

2, because it will mobilize international action and establish "a bold initiative consistent with America's moral heritage."

Abolition cannot be realized without a formal abolition regime, so some advocates are pushing for the next Administration to propose a detailed treaty with abolition by date certain. Others view abolition as a "vision" and advocate for a series of near term steps which include: de-alerting, substantial force reductions, and CTBT ratification. In either case, the verification technology and diplomatic framework do not currently exist to support a regime of no nuclear weapons.

Global Coalition to Contain the Risk of Nuclear Terrorism:
According to this view, abolition does not directly address the immediate risks and can compromise the value that nuclear weapons continue to contribute, through deterrence, to U.S. security and international stability.

While supportive of nuclear stockpile reductions, advocates of this view propose a series of actions that the US could immediately undertake that would more directly address the nuclear terrorism risk such as strengthening programs to secure nuclear material, establishing a nuclear inventory, and strengthening "day after" programs. Key multilateral actions would include: ratifying CTBT, developing an international regime for management of the fuel cycle, and promoting scientific exchange. Since, according to this view, nuclear deterrence would remain a core capability, the US should also refurbish the US nuclear arsenal & infrastructure.

Several issues were raised regarding the CTBT that apply under either the *Abolition* or *Global Coalition* perspectives:

1. The path to Senate ratification of the CTBT might be smoother if it is pursued under a 5-year "rolling approval" process.

2. Ratification should be promoted as a US security benefit, not as a means to affecting the behavior of other countries.

3. The capability of verification technology must be clearly stated. That is, while a zero yield regime cannot be verified, a CTBT can be verified "to a degree that would insure that no country could alter the current strategic balance in any meaningful way."

A few points were raised regarding a No First Use Policy that apply under either the *Abolition* or *Global Coalition* perspectives:

1. There is a possibility that such a policy would undercut the extended deterrent - or "nuclear umbrella" - that the US extends to allies and thereby increase the risk that non-nuclear allies choose to develop their own nuclear capability.

2. The policy is unlikely to change the behavior of other countries.