Differentiation and Defense:

An Agenda for the Nuclear Weapons Program



House Policy Committee

Subcommittee on National Security and Foreign Affairs

U.S. House of Representatives

February 2003

Subcommittee Mission and Members

The Policy Committee is the House Majority's forum for discussion of specific legislative initiatives, for the enunciation of Republican priorities on issues, and for the resolution of inter-jurisdictional policy disputes within the Conference.

The House Policy Subcommittee on National Security and Foreign Affairs works to help coordinate the policies of the House Armed Services Committee, the Committee on International Relations, the Select Committee on Intelligence, and other House committees with responsibility for issues that affect national security and foreign affairs.

The study for this report was conducted during the second session of the 107th Congress, throughout 2002. Members of the Subcommittee during this period are listed below.

Heather Wilson (NM), Chair Chris Cox (CA), Committee Chair Shelly Moore Capito (WV) Ander Crenshaw (FL) Tom DeLay (TX) Lincoln Diaz-Balart (FL) Vito Fossella (NY) Ben Gilman (NY) Mark Green (WI) Henry Hyde (IL) Brian Kerns (IN) Joe Knollenberg (MI) Ron Lewis (KY) Todd Platts (PA) Bob Schaffer (CO) Bob Stump (AZ) John Sununu (NH) Todd Tiahrt (KS) Pat Toomey (PA) David Vitter (LA) J.C. Watts (OK) Roger Wicker (MS) Bill Young (FL)

For additional information on the House Policy Committee and access to other reports and statements refer to its web-site at www.policy.house.gov.

Over the last year, the Subcommittee on National Security and Foreign Affairs of the House Policy Committee has undertaken a review of U.S. nuclear weapons strategy and force posture. This report is a result of that effort.

From time to time, it is important for the Congress to step back from the day-to-day struggles to pass appropriations, oversee the operation of federal agencies and craft legislation to pause and to consider what direction we should be heading on major policy issues affecting the nation.

In the 1970s and 1980s, a significant number of members of Congress were involved and informed on matters relating to nuclear weapons and the nuclear weapons complex. That is less true today. Members of our subcommittee felt it was time to review and reconsider these questions.

The recommendations contained in this report have implications across a wide range of departments, budgets, and programs.

I appreciate the involvement of committee members and their staffs in the creation of this report. Without their participation, it would not have been possible. Gary Laughlin, a Congressional Fellow from the American Society of Mechanical Engineers, helped coordinate the work of the Subcommittee this year and provided valuable assistance in the compilation of this report. His effort made this undertaking possible.

Heather Wilson Member of Congress, New Mexico

Contents

Executive Summary	1
A New World	2
Deterrence in a Changed World	3
Offense and Defense	4
Force Size and Composition	5
Nuclear Test Readiness	6
Hard and Deeply Buried Targets	7
Advanced Development	8
Ballistic Missile Defense	9
Homeland Defense	10
Preventing Proliferation	11
Maintaining the Complex	12
The End of Arms Control	13
Recommendations for the 108 th Congress	14
Appendix: The Moscow Treaty	15

Executive Summary

Nuclear deterrence was the foundation of our national security strategy for nearly half a century during the Cold War. The end of the Cold War ushered in a period of transition as we adjusted our strategy and force posture to new realities.

America is now the dominant military power in a more complex world. The nuclear threat is numerically smaller but more diverse and less inherently stable.

In these new circumstances, deterrence – the capacity to dissuade others from taking action contrary to our vital interests by the maintenance of overwhelming power – will continue to be a vital part of our security strategy. But the capabilities required for effective deterrence have changed.

In particular, we must be able to hold at risk things which are of value in each non-allied state that has nuclear weapons. This differentiation requires that we maintain a variety of capabilities and options, developed in advance, for the President to have at his disposal. By having them at his disposal, the United States will be more likely to avoid war, control the escalation of a conflict, or end a conflict on terms acceptable to us.

A stockpile of 1700 to 2200 weapons should be adequate for deterrence, but we will need to hold at risk hard and deeply buried targets and extend the life of the nuclear stockpile through the stockpile life extension program. The second element of our deterrent strategy is defense. In a departure from post World War II practice, America will increasingly rely on ballistic missile defenses to protect ourselves and our allies from limited attacks and attacks by sub-state entities. We must deploy ballistic missile defenses.

Over the last decade, we have not sustained parts of our nuclear weapons complex which demand attention. The Congress should support reducing test readiness to 18 months, reinvigorate the advanced development program, and upgrade facilities to support refurbishment of the stockpile and science based stockpile stewardship.

With respect to non-proliferation, our efforts have been successful largely where they were not needed and proliferation poses new threats for America.

The United States should focus its efforts to prevent proliferation in three areas: improving control of Soviet legacy systems, strengthening supplier control regimes, and developing the capacity to disrupt the supply and efficacy of weapons of mass destruction.

But we cannot rely on an imperfect nonproliferation regime to protect the homeland. In addition to deployment of ballistic missile defenses, we must invest in technologies and intelligence capabilities to protect ourselves from weapons of mass destruction delivered by unconventional means.

A New World

When the Soviet Union collapsed and the Cold War ended in 1991, America went through a period of transition concerning our nuclear strategy and force posture.

Many of the assumptions of an entire generation of military planners and strategic thinkers changed. The armed standoff between two ideologically opposed and militarily powerful nations was over. Eastern Europe, seeing its opportunity, lunged toward freedom's light. The weak foundations of communist economies crumbled.

With the United States building new relationships with the democracies of the former Soviet empire, the risk of deliberate attack by Russia is lower than ever. The risk of disorder and loss of control of nuclear weapons from Russia's still enormous nuclear arsenal continues to be a grave concern.

Our efforts to prevent the proliferation of nuclear weapons have been successful largely where they were least needed. Twelve nations are known or suspected of having nuclear weapons programs and many are developing ballistic missiles to deliver them.

Of greatest concern are the nuclear weapons and ballistic missile programs of countries such as North Korea, Iran, and Iraq, whose postures remain hostile to the United States.

Likewise, a new and virulent form of terrorism threatens the United States and our way of life. These sub-state and non-state entities have few of the inhibitions of states. They are fanatics, determined to kill and destroy. There is little question that terrorist elements wish to acquire nuclear materials and nuclear devices.

While the United States is a dominant military power, we operate in a much more complex environment than we did during the Cold War. There are more nations armed with nuclear weapons. There are multiple potential opponents and sources of conflict that could affect America's vital interests.

Deterrence in a Changed World

As Russia's foreign policy leans increasingly towards the West, some have questioned the continued relevance of deterrence, suggesting that nuclear weapons are no longer relevant to American security.

At its core, deterrence is the capacity to dissuade others from taking action contrary to our vital interests by the maintenance of overwhelming power. It requires that others perceive our willingness to use that power to stop them or impose an unacceptably high price.

Russia today is the only nation that has the capability to threaten the continued existence of the United States. While we assess the likelihood of their doing so to be much diminished, the futility of challenging our military capability probably discourages the resurgence of any anti-U.S. military policy in Russia and encourages Russia's continued prowestern evolution.

Nations including China, North Korea, Iran and Iraq, which have or are developing weapons of mass destruction, continue to pursue foreign policies ranging from potentially threatening to openly hostile.

Nuclear weapons and deterrence remain as relevant today as they were at the height of the Cold War. What <u>has</u> changed are the elements that are likely to make deterrence effective in today's world: differentiation and defense.

Differentiation

Our nuclear forces used to be oriented

toward a single likely foe – the Soviet Union. Everything else was a lesser included case. These footnotes of our nuclear strategy and force posture have grown in relative importance, justifying careful thought and planning for each circumstance. What do the leaders of each country with weapons of mass destruction value most and how can we hold those things at risk so as to deter the use of weapons of mass destruction against us or our allies?

The answer to this question will be different in each case and will require a variety of capabilities and options, developed in advance, for the President to have at his disposal. By having them at his disposal, the United States will be more likely to avoid war, control the escalation of a conflict, or end a conflict on terms acceptable to us.

Defense

After exploring defensive concepts in the 50s and 60s, the United States and the Soviet Union acknowledged the overwhelming superiority of the offense and, through the Anti-Ballistic Missile (ABM) Treaty, incorporated mutual vulnerability into nuclear strategy. While we may still be unable to envision an impermeable shield against a massive assault on the United States, we should be capable of protecting ourselves against an accidental or rogue attack, or an attack by an emerging power.

The ability to parry and respond by means of our own choosing is a strong element of an effective deterrent against a multitude of potential enemies.

Offense and Defense

The inclusion of active and passive defenses in America's nuclear strategy and force posture is a significant departure from post-1960s strategy.

Following the Soviet build-up in the 1960s and 1970s, the technological dominance of the offense and the eventual limitation of defenses set the parameters of nuclear strategy. We faced a monolithic enemy that, despite military doctrine, was basically as averse to using nuclear weapons as we were. Our strategy relied on the ability to retaliate.

There has always been a distaste for assured destruction. But even with new labels like "sufficiency", "flexible response" or "essential equivalence" no real alternative to the balance of terror emerged.

Part of the challenge was technological: the computing power and control systems to detect, target, track and shoot down an ICBM just weren't there. But there was also a grim logic to massive retaliation in a world of two superpowers. Stable mutual deterrence was preferable to both sides seeking decisive advantage and both worrying that they were losing that advantage.

Circumstances have changed profoundly. The threat is numerically smaller but more diverse and less inherently stable. And we have developed the technology.

We are less than two years away from fielding the first elements of land and sea based missile defense systems. We are within five years of an operational Airborne Laser system capable of shooting down missiles in boost phase.

National Missile Defense is moving from an R&D project to system deployment. The Congress should continue to support the development, testing and eventual deployment of ballistic missile defense systems.

Preemption

In addition to developing missile defense, the United States must further develop tools to detect, defeat or disrupt weapons of mass destruction before they can be used.

In some cases, these defenses may involve U.S. military forces. In others, it may be law enforcement or intelligence operations using highly sophisticated techniques.

At the zenith of our national power, America must not squander our moral authority by justifying the use of force preemptively other than in highly unusual circumstances. Possession of weapons of mass destruction alone is insufficient justification for military action. Possession combined with evidence of the intent to use those weapons is sufficient.

There is no obligation to wait to be hit first. There is a limited right of anticipatory self-defense in some circumstances, even if it is not certain that a strike is imminent.

With these weapons, imminence is imperceptible and the risk of inaction is incalculable.

Force Size and Composition

The current U.S. nuclear weapons stockpile is designed and sized for the Soviet threat of the past.

The Administration believes that a much smaller level of between 1,700 and 2,200 deployed strategic nuclear warheads is sufficient to provide for American security. The Moscow Treaty codifies America's intent to reach that level by 2012.

There are some principles that should set parameters for the size of our deployed stockpile.

> We should retain the strategic triad of Submarine Launched Ballistic Missiles, Inter-Continental Ballistic Missiles and Bombers.

We should retain sufficient sizes and types of weapons to reliably hold at risk targets of value to potential adversaries possessing weapons of mass destruction.

With the exception of Russia, our deployed stockpile should be significantly larger than any other single nuclear weapons capable state.

Disposition of Warheads

The United States is currently unable to build a new nuclear weapon. We do not have the capability to build new nuclear primaries, or pits, beyond a very limited capability at Los Alamos National Laboratory.

There has been unwarranted criticism of the Moscow Treaty because it does not require that nuclear warheads be destroyed. No arms control agreement has ever had such a requirement or even a requirement to stop production of associated nuclear warheads. It isn't verifiable because the level of intrusion would compromise design details. Moreover, in the case of the United States, because we do not have the capacity to make replacements, if there is a problem with a deployed weapon, we need to maintain sufficient stored weapons to address the problem.

Stockpile Life Extension

There are nine types of bombs and missile warheads in the U.S. inventory. The nation's weapons are expected to remain in service well beyond their original design life.

The United States must refurbish and modernize each weapon that will remain in the stockpile. This is a complicated enterprise and requires long-term planning.

The Congress should fund the stockpile life extension program for the nuclear stockpile and should carefully monitor the implementation of this program over the next decade.

Nuclear Test Readiness

It's been ten years since America last conducted an underground nuclear test. Each year the Secretary of Energy must certify that he is confident the nuclear weapons stockpile is safe and reliable without having tested it.

The FY93 Energy and Water Development Appropriations bill included the Hatfield amendment, which temporarily banned testing. Each Administration has extended the moratorium. The amendment placed conditions, including the requirement that another country must test first, before a U.S. test could be conducted.

Since 1993, U.S. policy has posited the resumption of nuclear testing within three years of a Presidential decision to do so. A recent report from the DOE Inspector General¹ (IG) states that the Department of Energy may not be able to meet this requirement.

Nearly half of the people who have experience in nuclear testing no longer work for DOE. In addition, the equipment and facilities for conducting nuclear tests are obsolete or have not been maintained. The IG also found the Department did not have a solid plan to address these problems.

Three years for test readiness is in itself too long. A Presidential decision to conduct a test is likely only if there were a serious or imperfectly understood flaw in the stockpile, or the need for a new design beyond existing knowledge. The process to obtain a test decision could itself be exceedingly difficult and lengthy. Imagine telling a President we have a problem that requires testing, but we won't be able to test for another three years.

The timeframe to be prepared to conduct an underground nuclear test must be reduced to no more than 18 months, and possibly as low as 12 months. The National Nuclear Security Administration (NNSA) now has a plan for reaching the 18 month goal over several years.

The National Defense Authorization Act for FY2003 requires the Secretary of Energy to prepare plans for establishing a test readiness posture for intervals of six months from six months to twentyfour months.

The moratorium on underground nuclear testing depends on the success of the Science Based Stockpile Stewardship program. It will be about a decade before we see if the development of a simulation-based capability for certifying that the state of health of our nuclear weapons is sufficient.

The Congress must continue supporting the Science Based Stockpile Stewardship program. Given the uncertainty about whether it will be sufficient, the President must have a credible option available for testing a nuclear weapon within a more reasonable timeframe.

¹ National Nuclear Security Administration's Test Readiness Program, DOE Inspector General Audit Report, DOE/IG-0566, September 2002.

Hard and Deeply Buried Targets

Credible deterrence requires that the President be able to hold at risk the things most important to an adversary who would seek to attack America. Deep underground facilities, including hardened bunkers and hard-rock tunnels, provide effective haven from attack.

Our potential enemies are burrowing in their chemical weapons capability, their conventional capability, their command and control, biological and nuclear weapons programs. Our current weapons systems cannot destroy targets that are deeply buried in tunnels. They were not designed to do so.

In the 2001 Defense Authorization Bill, the Congress directed NNSA to study whether we can take an existing nuclear weapon and encase it in such a way so that it will penetrate the earth before it explodes. The intent is to hold at risk hard and deeply buried targets. Having a Robust Nuclear Earth Penetrator (RNEP) does not make it more likely that the President would use such a weapon. The use of nuclear weapons is one of the gravest decisions any President can contemplate. It does make it more probable that that weapon would destroy a deeply buried target if he had to use it, and, hence, more likely that we could deter the use of weapons of mass destruction by an enemy.

The President should have options -- the options of conventional forces, of precision conventional weapons, and of nuclear weapons that are capable of holding all targets at risk.

The Congress should continue to support the study and evaluation of munitions to hold hard and deeply buried targets at risk in order to ensure robust deterrence and effective Presidential options if needed.

Advanced Development

During the Cold War, America had an active advanced development program that explored ideas for new or modified nuclear weapons. This program advanced safety and reliability in weapon systems and considered new threats and problems.

In the past decade we have done very little to adapt the stockpile to the evolving capabilities of potential adversaries. The closest we have come are the stockpile life extension projects. These are important projects, but are inherently limited in nature.

An active advanced development program would include assessing the capabilities of adversaries, conceptualizing innovative methods for countering them, developing weapon system requirements, and prototyping and evaluating the concepts.

The 1993 prohibition against research on low-yield weapons (under five kilotons yield) is a significant barrier to a robust advanced development program. Congress should consider repealing this ban.

An active advanced development program, coordinating the efforts of both the NNSA and Department of Defense, is a necessary component of a capabilities-based defense strategy. It allows the United States to have teams of scientists and engineers working on emerging threats and potential problems before they become severe. Advanced development is another form of readiness.

An advanced development program will attract and train the next generation of scientists and engineers who will be responsible for maintaining the reliability, safety, and capability of the stockpile.

In addition, nuclear weapon designers contribute uniquely to intelligence about foreign technology. The absence of exploring new ideas negatively affects the capability of this critical function in a time of growing concern about proliferation.

The Congress should support the revitalization of the nuclear weapons advanced development program. The Nuclear Weapons Council should reestablish such a program consistent with the capabilities-based approach for national security.

We do not know what threats will face us from new adversaries who are seeking to acquire nuclear weapons and the ability to deliver them. It is wise to have an active program considering these potential challenges and how we might address them.

Ballistic Missile Defense

Ballistic missile intercept testing has demonstrated the technical capability to shoot down missiles. It is time to begin deployment of a layered missile defense system to counter the threat of a limited strike on the U.S. or its allies.

The U.S. should deploy a system scoped to destroying a limited attack from rogue states or accidental launches against the U.S., our troops overseas, and our allies.

Establishing a layered ballistic missile defense system is a long-term commitment. The technology will mature and change over time. Just as we've upgraded and improved our offensive forces (bombers, submarines, and missiles) we will do the same with our defenses. Initial implementation is a starting point to be built upon.

In particular, the airborne laser component of missile defense should move aggressively towards a deployment capability.

The deployment of a layered missile defense system will complement and enhance nuclear deterrence. It adds to deterrence by showing adversaries that their attack or threat of attack would have a high chance of failure.

Homeland Defense

The prospect of terrorists obtaining a weapon of mass destruction and delivering it by unconventional means creates completely new problems for our nation's defense.

The war on terrorism will be lengthy, and requires an offensive strategy – seeking out terrorist cells and destroying them. But we also have to improve our ability to defend ourselves at home.

The creation of the Homeland Security Department provides an opportunity to integrate our two greatest strengths – technology and intelligence – and use them to enhance our security.

Technology

The challenge is to detect, identify and disable harmful chemical, biological or nuclear materials before anyone is hurt.

Radiation detection equipment for detecting nuclear materials is not new. But most of it is narrowly focussed and requires close proximity to the material.

The Customs Service has been slow to evaluate the need for detection equipment and to establish plans for its deployment. Insufficient R&D is underway to develop new technologies, including remote sensing and broad area coverage.

The new Homeland Security Department and the Department of Energy must develop an aggressive and well-funded R&D effort that includes: Further development and deployment of technologies to sense and identify in real time nuclear materials coming through our ports, being carried through our airports or transported on our roads.

Developing low cost capabilities to continuously monitor air, water and food supplies in order to detect chemical and biological contaminants.

Developing the capability to rapidly and remotely locate nuclear materials over large areas, including cities.

Further development of techniques to disable explosives without detonating them.

Continued development and maintenance of the expertise to disable nuclear weapons, or bombs containing nuclear materials.

Intelligence

A weapon of mass destruction that reaches our border is already too close. Relying upon our intelligence capability, we must extend our secure zone away from entry points out to embarkation points and beyond.

To this end, we must continue to strengthen intelligence collection, analysis and information integration.

Preventing Proliferation

The spread of nuclear materials and missile technology will continue to be a national security challenge. Negotiated non-proliferation regimes have been successful largely where they were not needed.

The United States should focus its efforts to prevent proliferation in three areas: Soviet legacy systems, supplier controls, and disruption.

Soviet Legacy Systems

Since the collapse of the Soviet Union, the United States has funded cooperative programs, including Nunn-Lugar, to reduce the likelihood that materials and expertise from the Soviet nuclear weapons program would end up in the wrong hands. While certainly there has been some good done, these efforts have been excessively bureaucratic and lacking focus.

The United States needs to strengthen and re-energize its cooperation with Russia and other nations of the former Soviet empire by:

Involving the American private sector in the effort to redirect Russian expertise in a way that will benefit Russia's economy and American security interests.

Developing an overarching strategy to guide our cooperative programs.

Expanding co-operative programs with the Russians to improve their material control and accountability systems. Jointly exploring and developing with Russia the means to detect and interdict the movement of nuclear materials.

Supplier Controls

Beyond Russia, there are supplier states that sell materials to countries seeking to develop weapons of mass destruction. The United States needs to work with our allies to reinvigorate the supplier control regimes and engage other countries at the highest levels on the need to control the export of critical technology from their countries.

When necessary, the United States must be willing to impose stiff sanctions on companies and countries that export materials that must be controlled to prevent the proliferation of weapons of mass destruction. We must continue to influence other countries to do the same because sanctions are more effective when more countries are involved in enforcing them.

Disruption

Because the diplomatic and financial tools at our disposal to discourage proliferation are limited, we must directly face the threat proliferation poses to our nation. The United States should use its intelligence resources and technological capabilities to overtly and covertly disrupt the supply and efficacy of weapons of mass destruction being sought by countries and sub-state entities whose interests are contrary to our own.

Maintaining the Weapons Complex

The U.S. is currently unable to produce a new nuclear weapon. Since the closure of the Rocky Flats plant in 1989, we no longer have a nuclear primary, or pit, production facility with the exception of very limited capability at Los Alamos National Laboratory.

While the NNSA is in a site selection process for a new pit production facility, it will be more than a decade before it is operational.

This is just one example of the erosion of the nuclear weapons complex, which is particularly evident at our production facilities. The Congress and the Administration began a Facilities and Infrastructure program in last year's defense authorization bill to begin addressing this long-term modernization need.

The successful licensing of the Watts Bar Nuclear Station of the Tennessee Valley Authority for the production of tritium was an important success for the NNSA. This program reestablishes a domestic tritium production source, essential for the maintenance of the nuclear stockpile.

Three weapons in the enduring stockpile are in the early stages of programs to extend their life by replacing parts that are beyond their design life using modern electronics, materials and manufacturing processes that differ from when the weapons were originally qualified. This must be done without impacting the certification criteria of the nuclear assemblies of the warheads. Ensuring a fully capable nuclear weapons complex is necessary as long as we intend to have a credible nuclear deterrent. Central to this capability, even beyond having modern facilities, is having the confident, capable workforce needed to operate this complex.

The Science Based Stockpile Stewardship program was conceived to dramatically enhance the fundamental knowledge and simulation capability of the physics of nuclear weapons performance. This is envisioned as the method that will form the basis for the future annual certification of the stockpile (and, if needed, new weapons) in the absence of underground nuclear tests.

Congress must support modernization of the NNSA complex of laboratories and manufacturing facilities, the science based stockpile stewardship program, life extension programs, and advanced development programs so that the workforce will be fully capable of maintaining and certifying the nuclear weapons stockpile.

The life extension programs will challenge broader parts of the workforce through the next decade. If augmented with advanced development programs, the combination of challenging work should be sufficiently enticing and genuine to train a new generation of weapon scientists and engineers.

The End of Arms Control

Arms control dominated the national security agenda in the 1970s and 1980s. It was the centerpiece of America's relationship with the Soviet Union. Indeed, in the elaborate preparation for summits, America had to insist on two other "baskets" of issues – human rights and economic affairs -- that would be on the table. And "basket" was about the right size.

Arms control is not an end in itself and never has been. It is a tool to enhance security, particularly security against nuclear war.

But the most notable acts of disarmament have been as a response to the lowering of political tensions. It happens gradually over time when states do not feel their interests clash or they abandon military precautions against each other.

We are in that period of evolution with respect to our relationship with Russia. Arms control is no longer a dominating aspect of our relationship.

The President announced his decision to reduce the operationally deployed strategic nuclear arsenal to between 1,700 and 2,200 within a decade unilaterally, and invited Russia to do the same. While the Russians wanted and got the Moscow Treaty to memorialize those mutual decisions, America made it clear that we were not going to allow the slow machinery of formal negotiations to delay action.

The Moscow Treaty formalized decisions already made. It sealed a gentlemen's agreement. It was not the forum where rivals sought advantage or disadvantage and wrangled over arcane detail as was the case in past arms control talks.

The era of arms control with the former Soviet empire is over. In its place is a much richer, multifaceted relationship.

Multilateral Regimes

With respect to other security challenges posed by weapons of mass destruction, there are limited opportunities for strengthening arms control regimes in the areas of most concern. The states that are seeking to develop these weapons are largely uninterested in limiting their programs through negotiation or in honoring the agreements they make.

There is some potential to strengthen International Atomic Energy Agency (IAEA) inspections, and develop stronger export control regimes with likeminded states. But these efforts alone are marginal and cannot be relied upon to significantly increase America's security against those who would threaten us.

Recommendations for the 108th Congress

- 1. Continue to support the development, testing and eventual deployment of ballistic missile defense systems as an integrated element of deterrence and national security.
- 2. Accelerate the development of tools to detect, disrupt or defeat weapons of mass destruction before they can be used.
- 3. Fund the service life extension program for the nuclear stockpile and carefully monitor the implementation of this program over the next decade.
- 4. Require and support a test readiness program that could achieve an underground diagnostic test within 18 months.
- 5. Continue to support the Science Based Stockpile Stewardship program.
- 6. Support the study and evaluation of munitions, including nuclear, to hold hard and deeply buried targets at risk.
- Support the revitalization of the nuclear weapons advanced development program consistent with the capabilities based approach for national security. Consider repealing the ban against research on low-yield nuclear weapons.
- 8. Support research and development efforts for homeland security

including technologies to sense and identify nuclear materials, monitor air, water and food for contaminants, remotely locate nuclear materials over large areas, disable explosives without detonating them, and disable bombs containing nuclear material.

- 9. Improve our nuclear nonproliferation programs by involving the private sector in ways to benefit Russia's economy and U.S. security, expanding programs to improve Russian material control and accountability systems, and codeveloping with Russia means to detect and interdict the movement of nuclear materials.
- 10. Require that the U.S. in cooperation with our allies reinvigorate supplier control regimes to thwart countries selling technologies for proliferation of weapons of mass destruction.
- Invest in technologies and capabilities to disrupt the supply and efficacy of weapons of mass destruction being sought by countries and sub-state entities whose interests are contrary to our own.
- 12. Support the modernization of the NNSA complex of laboratories, manufacturing facilities, Science Based Stockpile Stewardship program, weapon life extension program, and advanced development programs so that the workforce will be fully capable of maintaining and certifying the nuclear weapons stockpile.

U.S.-Russia Strategic Offensive Reductions Treaty (The Moscow Treaty)

The United States of America and the Russian Federation, hereinafter referred to as the Parties,

Embarking upon the path of new relations for a new century and committed to the goal of strengthening their relationship through cooperation and friendship,

Believing that new global challenges and threats require the building of a qualitatively new foundation for strategic relations between the Parties,

Desiring to establish a genuine partnership based on the principles of mutual security, cooperation, trust, openness, and predictability,

Committed to implementing significant reductions in strategic offensive arms,

Proceeding from the Joint Statements by the President of the United States of America and the President of the Russian Federation on Strategic Issues of July 22, 2001 in Genoa and on a New Relationship between the United States and Russia of November 13, 2001 in Washington,

Mindful of their obligations under the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms of July 31, 1991, hereinafter referred to as the START Treaty,

Mindful of their obligations under Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons of July 1, 1968, and

Convinced that this Treaty will help to establish more favorable conditions for actively promoting security and cooperation, and enhancing international stability,

Have agreed as follows:

Article I

Each Party shall reduce and limit strategic nuclear warheads, as stated by the President of the United States of America on November 13, 2001 and as stated by the President of the Russian Federation on November 13, 2001 and December 13, 2001 respectively, so that by December 31, 2012 the aggregate number of such warheads does not exceed 1700-2200 for each Party. Each Party shall determine for itself the composition and structure of its strategic offensive arms, based on the established aggregate limit for the number of such warheads.

Article II

The Parties agree that the START Treaty remains in force in accordance with its terms.

Article III

For purposes of implementing this Treaty, the Parties shall hold meetings at least twice a year of a Bilateral Implementation Commission.

Article IV

- 1. This Treaty shall be subject to ratification in accordance with the constitutional procedures of each Party. This Treaty shall enter into force on the date of the exchange of instruments of ratification.
- 2. This Treaty shall remain in force until December 31, 2012 and may be extended by agreement of the Parties or superseded earlier by a subsequent agreement.
- 3. Each Party, in exercising its national sovereignty, may withdraw from this Treaty upon three months written notice to the other Party.

Article V

This Treaty shall be registered pursuant to Article 102 of the Charter of the United Nations.

Done at Moscow on May 24, 2002, in two copies, each in the English and Russian languages, both texts being equally authentic.

Released May 24, 2002