U.S. Nuclear Weapons Policies and Programs

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A Search for Technical and Policy Common Ground"

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Thank you. It's an honor to speak to a symposium sponsored by CISAC, which for almost a quarter of a century has brought intellectual rigor to important policy questions associated with nuclear weapons. This organization and many of you personally have devoted years to trying to limit the spread of nuclear weapons. One important tool in that fight is responsible behavior by those states that possess such weapons. The United States must set the standard for such responsible behavior, and it is doing so.

Today, I want to describe the U.S. Administration's view of the role of nuclear weapons in the post-Cold War era. Our nuclear policy has been frequently misunderstood and even distorted by opponents who seek to mislead rather than inform. We may have allowed these misunderstandings to arise by not always aggressively challenging misstatements, by not being forthright in explaining our policy and in particular by not describing how that policy strengthens and complements our strong support for non-proliferation. That's what I want to rectify today.

Overview of the Nuclear Posture Review

In nuclear policy, as in non-proliferation, President Bush has been a strong leader. The President made his position clear from the earliest days of the Administration. On 1 May 2001, at the National Defense University, he said:

> "We can, and will, change the size, the composition, the character of our nuclear forces in a way that reflects the reality that the Cold War is over. I am committed to achieving a

credible deterrent with the lowest-possible number of nuclear weapons consistent with our national security needs, including our obligations to our allies. My goal is to move quickly to reduce nuclear forces."

When that speech was made, we had not yet articulated the conceptual basis for reductions. For over a decade, analysts and officials had spoken of the "post-Cold war world." Now it was time to conduct a fundamental examination of the role of nuclear weapons in that world. That reexamination led to the December 2001 Nuclear Posture Review, which set forth the direction for American nuclear forces over the next decade and beyond. In my view, this was the most sweeping conceptual change in nuclear thinking since the late 1970s.

The Nuclear Posture Review reaffirmed that nuclear weapons remain a crucial element of U.S. national security strategy. But, consistent with the changed international environment, the Review embraced a radical departure from the past and a fundamental re-thinking of the roles and purposes of nuclear weapons. Among the many changes, three are most important:

- Instead of focusing on deterring the nuclear threat posed by a single, specific enemy, as in the Cold War, the Review established the need for a capabilities-based force to accomplish four distinct defense policy goals, which I will discuss in just a moment.

- Instead of treating nuclear weapons in isolation, the Review considered them as an integrated component of American military power, thus recognizing that we could achieve national security objectives through other means that previously could only have been addressed with nuclear weapons.

- Instead of treating the future as static and predictable, the Review recognized that requirements could change and that U.S. nuclear forces must be prepared to respond to those changes.

Let me discuss each of these three points in turn.

The Policy Goals of U.S. Nuclear Forces

Under the new thinking set forth in the Nuclear Posture Review, our nuclear forces serve four goals, goals that are also supported by other, conventional, military capabilities:

- First, to *assure* allies of our commitment to them and our ability to make good on that commitment. The implications of this goal are that forces must be effective, reliable, and clearly designed to respond to a broad range of contingencies, not just to a nuclear attack on the United States. Assurance serves our non-proliferation objectives because those allies with the capability to develop nuclear weapons can continue to forego doing so, safe in the knowledge of the reliability of the U.S. nuclear umbrella.

- Second to *dissuade* potential adversaries from trying to match our capabilities or from engaging in strategic competition. This requires that we maintain a combination of forces and infrastructure so that no potential power can have any hope of matching our capability and thus will be dissuaded from attempting to do so.

- Third, to *deter* any threats that do emerge. This implies an ability to hold at risk those elements of power that a potential adversary values.

- Fourth, to *defend* against and *defeat* those threats that, for whatever reason, we do not deter.

These policy goals help determine both the size and the nature of our nuclear forces.

The New Triad

If we had been discussing nuclear policy a few years ago, we would have spoken of a "triad" of bombers, ICBMs and Submarine Launched Ballistic Missiles. The Nuclear Posture Review broadens our thinking to encompass a New Triad that consists of:

- Non-nuclear and nuclear strike capabilities including systems for command and control,
- Active and passive defenses including ballistic missile defenses,

- The research and development and industrial infrastructure needed to develop, build, and maintain nuclear offensive forces and defensive systems.

To provide a practical means to implement this new, integrated approach, the President established a new Strategic Command, with responsibility for global strike—both nuclear and non-nuclear—and for integrating missile defenses with offenses.

Contrary to some reports, this new triad—and the Nuclear Posture Review generally—was not intended to lower the nuclear threshold, but continued the trend of the past decade towards a reduced reliance on nuclear forces. The new emphasis on ballistic missile defenses means that the United States will no longer be as heavily dependent on offensive strike forces for deterrence as it was during the Cold War. The strengthening of non-nuclear strike forces—including precision conventional strike and information operations—means that the United States will be less dependent than in the past on nuclear forces to provide offensive deterrent capabilities.

Present and Future Nuclear Stockpiles

Our new approach, coupled with the judgment that we no longer need to plan as if Russia presented an immediate threat to the United States, allowed major reductions in operationally deployed strategic nuclear forces. These reductions were codified in the Moscow Treaty. Over the next eight years, the United States will cut the number of deployed warheads by approximately two-thirds from today's level. By 2012, we will have between 1700 and 2200 operationally deployed strategic nuclear warheads. But the experience of the past decade and a half makes it clear that it is unwise for us to base our security on the false belief that we can predict the future. Thus, while dramatically reducing the number of deployed weapons, we must plan against an uncertain future.

Specifically, the United States needs to be prepared to respond to both unforeseen technical problems and unanticipated geopolitical change. One element of our strategy is a responsive nuclear weapons infrastructure, which I will discuss in a moment. But another component of such a response is the non-deployed, or reserve, nuclear weapons stockpile.

Historically, deployed nuclear forces have always been supported by a stockpile reserve to ensure military readiness is not compromised. The Administration has only recently defined the required size of this non-deployed stockpile. The Nuclear Posture Review simply said there would be weapons retained as a hedge against an uncertain future. But it took us some time to determine just how big a hedge was needed. As a result, the erroneous perception arose that we sought to retain the entire Cold War stockpile.

In May of this year, the President approved a stockpile plan that will dramatically reduce the current stockpile. As a result of the President's decision, by 2012, the United States' nuclear stockpile will be cut almost in half and will be the smallest it has been in several decades. The reductions will not, of course, lower the stockpile to 1700-2200 total warheads. As I noted, deployed nuclear forces have always been supported by a stockpile reserve. This practice must continue. Additional strategic warheads over and above those operationally deployed will be needed for three purposes:

- To support routine maintenance of the stockpile including logistics spares and replacing warheads eliminated during routine destructive testing.
- To hedge against unexpected geopolitical changes.
- To guard against technical failures.

In regard to this last point, we plan to preserve the traditional diversity of warhead types in the overall stockpile in order to mitigate technical risks. Although we are making progress in restoring a responsive nuclear weapons production infrastructure, we are not yet able to produce enough replacement warheads to respond to a technical problem involving the safety or reliability of one or more warhead types. Thus, for example, we are planning to deploy two types of ICBM warheads and will retain sufficient numbers of these two types in reserve so that if a technical failure occurred in one type, there would be enough warheads of the other type to restore our deployed ICBM force levels. We will apply this approach, where appropriate, to other nuclear delivery means as well.

In addition to strategic forces, a small number of warheads (reduced by 90% from Cold War levels) for U.S. non-strategic nuclear forces will be retained, among other things, to meet commitments to allies.

Responsive Nuclear Weapons Infrastructure

Of the many new concepts in the Nuclear Posture Review, one of the most important is formal recognition that a robust industrial base—a key element of which is a *responsive nuclear weapons infrastructure*-is as important as strike forces or defenses in achieving our overall goals. Right now, the responsive infrastructure is only a concept. But we are beginning to understand what it would look like. A truly responsive infrastructure would let us fix stockpile problems, modify existing warheads if needed, or produce replacement warheads without disrupting ongoing refurbishments, all much more quickly than in the past. One part of a responsive infrastructure is the capability to resume underground nuclear testing. While we have no plans to resume such testing, we need to maintain the ability to do so as a prudent hedge in case a problem is discovered in the stockpile that cannot be resolved without a nuclear test.

A truly responsive infrastructure will let us consider going much further in reducing the size of the reserve stockpile we must maintain. Our vision is this: the reductions in non-deployed weapons the President has approved will free up money from life extension starting in a few years. That money will be used to develop a responsive infrastructure. By late next decade, we can further reduce non-deployed weapons, depending on the new infrastructure for our hedge.

Near Term Implications

I've talked about numbers, but the Nuclear Posture Review has qualitative implications as well. Let me turn to two specific elements of our nuclear weapons program and how they relate to the principles we have been discussing. The Nuclear Posture Review highlighted the importance of being able to adjust to changing deterrence requirements. We have two efforts in this regard. First, we have a modest research effort on advanced concepts to meet potential new or emerging requirements. We are also studying an improved earth-penetrating bomb.

We intend to use advanced concepts funds to investigate new ideas, not necessarily new weapons. For example, we are beginning a study of the feasibility of adapting an existing nuclear warhead to provide a cruise missile capability with improved safety and use control. Some additional work is underway to examine the feasibility of improving warhead design margins in order to ensure long-term continued high confidence in warhead reliability without nuclear testing.

Perhaps the single most contentious issue in our program is not a weapon at all. It is a study: the study of a so-called "Robust Nuclear Earth Penetrator," often mischaracterized in the press as a "bunker buster." This study is to determine whether an existing warhead can be adapted--without nuclear testing--to improve our ability to hold at risk hardened, deeply buried facilities that may be important to a future adversary.

Public and Congressional Perceptions

The possibility of developing an earth-penetrating weapon is a good bridge to the final topic I want to discuss: public and international perceptions. There is a clear military utility to such a weapon, which is why the Defense Department asked for it to be studied. The post Cold War requirement to hold hardened and deeply buried targets at risk has been consistently identified in internal and external studies for several years. Before any decisions are made, however, we need more information—hence, a study. We will move beyond the study stage only if the President approves and funds are authorized and appropriated by the Congress. No decision will—or should--be made until the study is completed. The law is clear: Congressional approval is required to move to engineering development and separate Congressional approval would be required for production if the President were to approve these additional steps.

Specifically, what we are evaluating is an extension of what the United States did last decade. Then we adapted the B61-11 bomb to penetrate a few meters into frozen soil; now we want to do the same thing into rock. So why has this become so contentious? After all, even if deployed, this weapon does not represent a change from our policy goal of deterrence. Deterrence requires we be able to hold at risk that which an adversary values. Since more and more we see potential opponents putting important military facilities underground, our efforts to determine the potential

effectiveness of an earth-penetrating weapon reflect a continued emphasis on enhancing deterrence.

So, why is there such confusion on the Administration's nuclear policy? As I said before, some opponents seem to take satisfaction in misstating or misconstruing Administration policies. And admittedly, we could be more aggressive in ensuring these misstatements don't go unchallenged or uncorrected. Last year, several unrelated things happened:

- The Administration's National Security Strategy reaffirmed that in rare circumstances the United States would not necessarily wait to be attacked with WMD before it could respond to real threats.

- We sought and gained repeal of the Prohibition on Low-Yield Warhead Development, which banned research that "could lead to" designs of less than five kilotons. We did so to get the freedom to explore new concepts without the chilling effect on scientific inquiry that the law represented.

- We asked for very modest funding for some advanced concepts work and for the nuclear earth penetrator study.

From this set of circumstances, two misperceptions developed. First, it became part of the conventional wisdom that there were Administration plans to develop new, low yield weapons. There are no such plans. Second, some concluded these separate things were part of an overall strategy; that we were emphasizing "nuclear preemption" in U.S. military doctrine.

I assume you all understand this is nonsense. While no one wants to constrain a future President's options in advance, I've never met anyone in the Administration who can foresee circumstances in which we would consider nuclear preemption to counter rogue state WMD threats. Yet, this misperception continues to exist because we have not aggressively challenged and corrected it.

While nuclear preemption with non-existent new weapons was fanciful, there were some more responsible critics who also raised issues. Two are particularly important: whether our efforts lowered the nuclear threshold and whether they hurt nonproliferation.

We have pretty good answers. Even if they were to lead to lower yields, U.S. research programs would not blur the line between conventional and nuclear weapons or make nuclear use more likely. This is not simply an assertion; it is based on history. Starting in the 1950's and continuing through today, the U.S. nuclear stockpile has always contained warheads capable of producing very low nuclear yields. At the height of the Cold War many thousands of these warheads were deployed, but they were never used—even in regional confrontations where their use would not necessarily have provoked a Soviet response. There is no evidence that the simple possession of these weapons made nuclear use by the United States more likely. No President would be inclined to employ any nuclear weapon, irrespective of its explosive power, in anything but the gravest of circumstances. Simply put, the nuclear threshold for the United States has been, is, and always will be very high.

On nonproliferation, the major U.S. objective is to prevent rogue states and terrorist groups from acquiring weapons of mass destruction and systems for their delivery. Neither advanced concepts efforts nor studies of an earth-penetrating weapon will increase incentives for *terrorists* to acquire such weapons—those incentives are already high and are unrelated to U.S. nuclear capabilities. Nor are they likely to have any impact on *rogue states,* whose proliferation activities march forward independently of the U.S. nuclear program.

Over the past decade we have seen very significant reductions in the numbers of U.S. (and Russian) nuclear weapons, reductions in the alert levels of nuclear forces, and the suspension of nuclear testing by the five Nonproliferation Treaty nuclear weapons states. No new warheads have been deployed and there has been little U.S. nuclear modernization. There is absolutely no evidence that these developments have caused North Korea or Iran to slow down covert programs to acquire capabilities to produce nuclear weapons. Rather it is more plausible that such states are seeking such weapons, in part, to deter the United States from coming to the assistance of our friends and allies. It seems a stronger argument to say they may be reacting

more to U.S. conventional weapons superiority than to anything the United States has done, or is doing, in the nuclear weapons arena.

Nor is there any reason to believe that the pace of nuclear proliferation in South Asia is driven by what the Russians or we do in our nuclear programs. The one area where we should perhaps worry is in ensuring international support among friends and allies for our non-proliferation commitments and programs. But that's just another example of the need to have a coherent story.

Leading Global Nonproliferation Efforts

I'm particularly bothered by the charge that our policy hurts nonproliferation because our non-proliferation record is exceptionally good. Our nuclear posture and our non-proliferation policy are mutually supportive and entirely consistent with our obligations under Article VI of the Nuclear Nonproliferation Treaty. In 1995, when the NPT was indefinitely extended, the United States reiterated its commitment to work toward the ultimate goal of eliminating nuclear weapons and to general and complete disarmament. Remarkable progress has been made in fulfilling this commitment and reducing reliance on nuclear forces in our national security strategy. The nuclear arms race has, in fact, been halted. The United States has been reducing its nuclear forces and nuclear weapons stockpile in a consistent fashion through both unilateral and bilateral initiatives, and working cooperatively with allies and partners to further reduce nuclear threats. Those who question the Administration's commitment to nonproliferation are wrong and haven't looked at the record.

There is always more work to be done, but the Administration is proud of what it has accomplished. Take my own agency as one small example. The Department of Energy works with over 70 countries in various nonproliferation programs. We have accelerated the timeline for securing 600 metric tons of weapons-usable nuclear material at 55 sites in Russia and the Newly Independent States by two years. We've improved the security of 77% of the Russian Navy nuclear weapons and fuel sites along with many Strategic Rocket Forces sites. To make arms reductions irreversible, we're working with Russia to eliminate its remaining plutonium production reactors and to dispose of excess weapons-usable plutonium. We've launched the

Megaports Initiative to deploy radiation detection capabilities to major ports to pre-screen cargo containers for dangerous nuclear and radiological materials. We've conducted three operations in the past year alone to remove under-secured fresh nuclear fuel from Bulgaria, Romania, and, most recently, Libya.

On May 26, Secretary of Energy Spencer Abraham announced plans to consolidate and accelerate the Department's nuclear and radiological materials removal and security efforts and to rapidly identify and address any gaps in current security coverage and recovery/removal efforts. Under this new "Global Threat Reduction Initiative" we will systematically address each facility worldwide that possesses high-risk fissile and other nuclear materials and poses a threat to the United States and the international community. This new initiative will build upon existing and long-standing U.S. nonproliferation efforts and will be carried out in close cooperation with the International Atomic Energy Agency and global partners. Through it we will ensure that nuclear and radiological materials do not fall into the hands of terrorists or other rogue actors.

That's just a small sample of the efforts of one agency. Add to that other Administration initiatives from the G-8 Global Partnership to the Proliferation Security Initiative to the de-nuclearization of Libya to the President's recent fuel cycle proposals. The President recently participated in the Sea Island summit that brought together G-8 leaders to find ways to build on their shared interest in a better, more peaceful world. The participants agreed on an important new action plan, including strengthening measures against nuclear proliferation and bioterrorism, expanding the Global Partnership, and expanding the Proliferation Security Initiative. We are beginning to see the real potential of what can happen when the nations of the world come together to pursue a common aim. I'm proud of the leadership President Bush has shown in this area and I'm fully confident that with the continued leadership of the United States, even greater progress lies ahead.

Conclusion

In the coming years, the United States will continue to lead the way to a safer world through the deep reductions in nuclear forces codified by the Moscow Treaty, through Nunn-Lugar and other

cooperative threat reduction efforts, and through other actions. At the same time, although conventional forces will assume a larger share of the deterrent role, we must and will maintain an effective, reliable, and capable—though smaller—nuclear force as a hedge against an uncertain future in a world in which substantial nuclear arsenals remain. Our ongoing efforts to reduce the current stockpile to the minimum consistent with national security requirements, to address options for transformation of this smaller stockpile, and to create a responsive nuclear weapons infrastructure are key elements of the Administration's national security strategy. Carrying out these efforts will pose no risk to nonproliferation.

No responsibility of a President is more important than national security and no element of national security policy is more important than nuclear policy. Mischracterizations by the uninformed should not blur the fact that our policy is—and will continue to be—what the President called for in 2001: achieving a credible deterrent with the lowest-possible number of nuclear weapons consistent with our national security needs.
Thank you.