Nuclear Weapons Research, Development, Testing, and Production
Speaker: William Peden, Greenpeace International

Mr. Chairperson, delegates, and non-governmental observers,

My name is William Peden and I am the Nuclear Disarmament Coordinator for Greenpeace International. I have been asked by my colleagues to make a presentation on the current status of nuclear weapons research, development, testing, and production programs in the nuclear weapons states.

In previous years you have heard American and French NGO representatives speak on this topic, with a focus on the programs of those two countries. However, while the United States continues to outspend all the other nuclear weapons states in developing new infrastructure for nuclear weapons development, the others have not been idle. In particular, the United Kingdom is actively colluding with the United States and France, to maintain and develop their respective nuclear arsenals through an extensive cooperative effort on nuclear weapons research and development.

Whereas I and my colleagues in the United States, France and elsewhere are involved in the opposite -- an extensive cooperative effort to monitor, educate about and actively oppose these programs.

My short presentation today will not be comprehensive -- if it were we would be here for at least as long as this Review Conference is to last -- but to rather illustrate to you one central reality: nuclear weapons are now increasing, not decreasing, in legitimacy, sophistication, and importance in some if not all of the nuclear weapon states.

Illustrative of this trend is a description provided by U.S. Defense Secretary William Cohen in his February 2000 Report to the President and Congress, of an expansive role for nuclear weapons "to deter any potential adversary from using or threatening to use nuclear, chemical, or biological (NBC) weapons against the United States or its allies, and as a hedge against defeat of U.S. conventional forces in defense of vital interests."

This capability is being concretely manifested through programs which are rebuilding and modernizing nuclear weapons research, development, testing and production infrastructures in the leading nuclear weapons states, including new generations of super-technologically advanced experimental facilities.

In the five years since the last Review Conference there have many disturbing developments in this field:

* Advances in microelectronics and other technologies, which can give new military capabilities to nuclear weapons in some cases without further nuclear testing;

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* Advances in surrogate nuclear testing and simulation capabilities in the nuclear weapon states, tempting them to develop both immediate arsenal improvements and longer-term studies aimed at revolutionary new developments;

* Institutional consolidation and advancement by nuclear weapons advocates in the U.S.;

and not least,

* A more cunning and pervasive pattern of dissimulation by the nuclear weapons institutions, through which domestic public and political and, it is hoped, diplomatic opinion can be lulled into complacency.

An example of this last is the poster display mounted by the United States in the hall outside, which is factually wrong in several particulars and which entirely contradicts the reality of the nuclear weapons program in this country.

Among the nuclear weapon states, the U.S. is at the top of the league in its proliferation of new military roles for nuclear weapons, in the development of new techniques for circumventing the Comprehensive Test Ban Treaty (CTBT), and in the scale of its proposed investment in new nuclear weapons design, development and production facilities (estimated cost: $60 billion U.S. dollars over a 13 year period).

The increasing emphasis on, and legitimacy of, nuclear weapons in the nuclear weapons states is not necessarily inexorable. I will conclude with a few concrete recommendations by which you could halt and even reverse this trend.

My colleagues and I can, of course, provide you with further details, background, and analysis upon request. But in the time left to me I would like to outline the conclusions we have drawn from our extensive research through a wide variety of corroborative official documents and other evidence.

1. Despite the NPT requirement to end the arms race, all five nuclear weapon states are engaged in programs to modernize their nuclear forces. These activities are often disguised behind or within euphemisms such as “stockpile stewardship” programs, “safety” studies, “life extension programs,” and “routine maintenance.” — anything but what they are — programs to maintain and enhance existing nuclear arsenals. Most of these programs are anything but routine, and most involve great expenditures to preserve and extend nuclear design and production capabilities. In the U.S., for example, the rate of spending for nuclear weapons design, testing, and production now significantly exceeds, in constant dollars, the average annual expenditure for directly comparable activities during the Cold War.

2. In the U.S., this process has already resulted in the development and deployment of one new nuclear weapon variant, without the need for underground tests. This weapon, called the “B61-11,” is an earth-penetrating air-launched nuclear bomb with widely-variable yield suitable for both tactical and strategic roles. In 1996, its use was threatened against Libya.

3. A militarily-significant upgrade of more than 3,200 deployed submarine-launched nuclear weapons is currently underway in the U.S. Under the misleadingly-named “Submarine Warhead Protection Program” two new warhead design options are being pursued to replace the W76 (100 kiloton) and the W88 (475 kiloton). One, a “mature” pre-tested design, would use a recycled plutonium pit. The other would use an entirely new, untested design, to be certified without underground tests. A third possibility involves an upgrade of the W76, the most numerous warhead in the U.S. arsenal. Under the pretense of replacing aging weapons parts to prevent potential age-related defects, this upgrade will give
them a near-ground-burst capability, making them extremely lethal against hardened targets, and upgrading them to potential “first strike” weapons. This could effectively compensate for the loss of ICBM hard-target killers, slated to be removed from the arsenal under START II. Under the Stockpile Stewardship program, modifications or upgrades -- including enhanced military capabilities -- are planned for every weapon type in the U.S. arsenal. In a recent interview, Undersecretary of Energy Ernest Moniz declared: “Our tools under stockpile stewardship are working so well today that we are not only able to certify safety and reliability... but we are also able to meet new military requirements.”

4. In the U.S. and Russia, official military doctrine has been evolving to more closely integrate nuclear with conventional military options. In Russia the emphasis has been on defense and in the U.S. it has been on counterproliferation and force-projection missions. Official statements from the U.K. and NATO now mention a broader, “sub-strategic,” role for nuclear weapons and they now view nuclear weapons as a “political tool” essential to deter aggressors.

5. In all of the nuclear weapon states, the development of advanced experimental and simulation capabilities for nuclear weapon design and development is corroding the “C” (Comprehensive) in the “CTBT.” The creation and subsequent proliferation of these new technologies worldwide -- technologies which would be unnecessary if the goal were merely to maintain existing nuclear forces -- through overt sharing of facilities, technology and knowledge, cooperative research, conferences, and university contracts is as tragic as it is gratuitous.

6. Some of these technologies appear to violate the letter of the CTBT. Inertial confinement fusion (ICF), for example, aims to create a nuclear explosion without using fissile material. So far, this has not happened, but large sums of money are being spent on its achievement by a variety of means. Most of these funds are being spent by nuclear weapons design laboratories, directly or indirectly for the purpose of nuclear weapons design. Whether attempted directly with high explosives, indirectly with high explosives (an approach now being pursued jointly by the U.S. and Russian weapons laboratories), with lasers (e.g. at the National Ignition Facility (NIF) in the U.S. and the Projet Megajoule in France), with capacitor discharges, with particle beams, or with anything else they can create, these facilities and experiments are very useful for advanced nuclear weapon design and related military-scientific research.

The U.S. NIF, which will be forty times larger than any laser in the world today, is slated to be used for a wide range of applications, from training weapons designers in nuclear weapons science to nuclear weapons effects testing. The NIF, in combination with other Stockpile Stewardship facilities could potentially lead to the development, over the long term, of pure fusion weapons not requiring plutonium or uranium. It may also play a role in researching new missile defenses. Official U.S. documents indicate that the NIF may prove useful in research on low-yield nuclear interceptors for use against ballistic missiles capable of carrying biological or chemical agents, as well as nuclear warheads.

According to some independent experts, the superlaser is the most important technological development of the past 10 to 15 years in the realm of nuclear weapons. Last year saw the formal entry of the United Kingdom into collaboration with the United States on the NIF. The U.K. Ministry of Defence announced plans to invest a substantial amount, on the order of £100M British pounds, in order to expand the NIF’s experimental capabilities. The U.S. has also made direct collaboration agreements with Germany that are

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independent of similar agreements made with England, France and Japan. It is particularly disturbing to see that Germany is listed as the prime partner to the United States for the development of this technology since Germany is not a nuclear weapon state, and the superlaser technology has, in this case and others, been presented as a “peaceful” technology.

The questions surrounding the legality of these ICF facilities and the implications of developing such devices led a United States Senator, Tom Harkin, to ask some probing questions of the U.S. Administration. As Senator Harkin notes in his letter, “some of these explosions would go well beyond the four pounds of TNT nuclear yield equivalent that the nation renounced in August 1995 when President Clinton announced that the United States would support a ‘zero yield’ treaty.” As far as we are aware, he is still waiting for an official response. The one response he did receive was from the Under-Secretary of State for Arms Control, John Holum, who has admitted that these questions were “fair” to ask and deserved an answer. We would encourage other NPT states parties to ask similar questions of the U.S. State Department.

7. An intensified schedule of subcritical nuclear tests involving explosively-driven fissile material is underway at the U.S. and Russian test sites and laboratories, including above-ground tests in tanks using new, highly-advanced diagnostic equipment. The U.S. Nevada Test Site remains ready for resumption of underground testing and is in use for a wide range of weapons experiments, including “subcritical” tests in which packages of high explosives and plutonium are exploded underground without quite reaching self-sustaining nuclear chain reactions. Similar tests are conducted in steel tanks above ground at the Los Alamos National Laboratory in New Mexico, using an isotope of plutonium with a higher critical mass than that used in weapons. This procedure may allow weapons designers to use test devices which more closely resemble nuclear weapons primaries, the first stage of thermonuclear warheads. Since signing the CTBT in September 1996, the United States has exploded eleven subcritical tests underground at the Nevada Test Site.

8. The United States is developing multi-billion-dollar plans for the renewed large-scale production of nuclear weapons components. These plans envision a capacity of 450-500 new plutonium pits and thermonuclear explosive packages per year, despite an inventory of thousands of spares.

9. In Britain, a work plan for the Atomic Weapons Establishments, recently found in a dustbin, makes quite clear that their priorities lie on the side of maintaining and improving upon the status quo rather than on disarming. Strategic Imperative Number Two of the British nuclear weapons laboratories is to ensure the “continuing availability of a research and development program to support the nation’s current and future requirements for nuclear weapons.” Number Three is to “provide production capability and capacity to meet national weapon programme requirements.” By December 2000 a plan is to be produced to “safeguard UK options and capabilities for a future nuclear weapon…”

10. In France they are more blunt about the true objective of their current nuclear weapons program. A recent article in *Le Monde* extolled the scientific brilliance of the French program and the French have no problem in admitting that they are currently spending, this year alone, $70 million U.S. dollars, on developing a replacement warhead for their submarine launched system and at least 2,300 million US dollars on a new warhead for their nuclear bombers. France is developing new computers, new lasers and other paraphernalia to support this perceived need.

The one and only conclusion we have come to, knowing all of the above, is that all of the declared nuclear-weapon states are involved to differing degrees in maintaining the nuclear status quo well into this new millennium. This undermines their stated “unequivocal” commitment to the goal of global elimination of nuclear weapons and is fundamentally inconsistent with both the “cessation of the nuclear
arms race" and disarmament obligations of NPT Article VI, not to mention in the case of ongoing British--French--U.S. cooperation, their NPT Article I, commitments.

Finally, one should not assume that the nuclear weapons programs of India, Pakistan, and Israel are static. Nuclear weapons design and "stockpile stewardship" are not two separate activities, whether one is discussing the nuclear weapons programs of the declared nuclear weapons states or of the other states known to possess nuclear weapons. Previously the experiments undertaken at above-ground experimental facilities culminated in the underground test of a new nuclear weapons design. Now, these experiments culminate in ever-more sophisticated and complex nuclear weapons computer simulations and, it is hoped by the nuclear weapons authorities, new, deployable, nuclear weapons designs. India and Pakistan also have laboratory testing programs that they will rely upon to provide them with new information about nuclear weapons. While these programs may be limited in comparison with the five NPT nuclear weapons states, it is clear that they are functional programs. After all, India and Pakistan relied upon them to design the devices that were exploded in 1998. Similarly, Israel, which is widely believed to have a comparatively large and modern arsenal, has managed to develop its stockpile largely on the basis of experimental and computational facilities not involving nuclear tests.

Before proceeding to our conclusions and detailed recommendations, I cannot but help observe that we are meeting at a moment of great crisis and opportunity in the history of nuclear weapons. At this particular time, the substantive decisions made here -- or (and it would be tragic) the lack of such decisions -- will have profound consequence for humankind in the years to come. Your decisions will not only affect the future of the NPT regime, but the substantive weight of your decisions will also greatly color the context of U.S./Russian bilateral negotiations, upon which so much depends.

The new Russian national security doctrine, released in January of this year, explicitly recognizes the profoundly dangerous and destabilizing implications of the new nuclear research and development regime:

*The growing technological surge of some leading powers and their growing possibilities to create new-generation weapons and military hardware are creating prerequisites for a qualitatively new stage in the arms race and a dramatic change in the forms and methods of waging hostilities.*

We truly stand at the crossroads. It is a time for decisive action, because without such action, the options we have today will not be available tomorrow. Contrariwise, with your strong and substantive action, new options will appear for everyone. What Petra Kelly of the German Green Party once said applies to our work here in these brief few weeks: "If we do not do the impossible, we shall be faced with the unthinkable." This Review Conference could, however, reverse this trend.

Our recommendations to this NPT Review Conference are as follows:

1. An immediate unequivocal commitment to end the qualitative improvement of nuclear arms -- a commitment that no state will design, develop, produce, or deploy new, modified, or repackaged nuclear weapons in any way that endows any weapon with improved military characteristics.

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*National Security Concept of the Russian Federation, full English translation from Rossiiskaya Gazeta, January 18, 2000, Approved by Presidential Decree No. 1300 of 17 December 1999 (given in the wording of Presidential Decree No. 24 of 10 January 2000)*
2. An immediate moratorium on all activities related to the National Ignition Facility and the French Megajoule laser due to their presumptive illegality under the Comprehensive Test Ban Treaty. Further, there should be an independent international investigation of all Inertial Confinement Fusion research activities for a) their compliance or non-compliance with the CTBT, and b) their proliferation potential.

3. An immediate halt to all underground subcritical experiments. Further, the two remaining active nuclear test sites, Nevada in the U.S. and Novaya Zemlya in Russia, should be closed and decommissioned.

4. An immediate halt to all programs of above-ground subcritical tests involving fissile material now taking place at the weapons laboratories of at least some, if not all, of the nuclear weapon states.

The closure and monitoring of the nuclear weapons infrastructure in all nuclear weapons states must begin early in the process of disarmament. Nuclear weapons research, testing, and component production should be halted while reductions are in progress, not after, with nuclear weapons production and research facilities subject to intrusive verification regimes at the earliest possible time. The continued pursuit of increased nuclear weapons knowledge by one state will be matched to a greater or lesser degree by others. The longer such activity continues prior to achievement of an abolition regime, the greater and more widespread the technical capability for breakout is likely to be. Meaningful progress on nuclear disarmament will require disarming the institutions that continue to drive the arms race -- in flagrant disregard for the NPT and in the face of overwhelming international demands for the elimination of nuclear weapons.

Thank-you for your attention.

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