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U.S. Prepares to Upgrade Nuclear Warhead Arsenal

Walter Pincus

[*The Nuclear Proliferation Treaty seeks to prevent the proliferation of nuclear weapons by preventing non-nuclear powers from developing nuclear weapons and requiring that nuclear powers dismantle their stockpiles. Mohammed ElBaradei, Director-general of the International Atomic Energy Agency (IAEA), has described as "unworkable" the way of thinking that it is "morally reprehensible for some counties to pursue weapons of mass destruction yet morally acceptable for others to rely on them for security and indeed to continue to refine their capacities and postulate plans for their use." In the latest U.S. flouting of NPT obligations, the National Nuclear Security Administration has now announced plans for a new generation of nuclear warheads. Japan Focus*]

By the end of the year, the government plans to select the design of a new generation of nuclear warheads that would be more dependable and possibly able to be disarmed in the event they fell into terrorist hands, according to the head of the National Nuclear Security Administration.

The new warheads would be based on nuclear technology that has already been tested, which means they could be produced more than a decade from now to gradually replace at lower numbers the existing U.S. stockpile of about 6,000 warheads without additional underground testing, said Linton F. Brooks, administrator of the NNSA, which oversees the U.S. nuclear weapons complex, and other government officials.



The warhead redesign is part of a larger, multibillion-dollar program to refurbish the nation's nuclear-weapons stockpile and to consolidate nuclear plants and facilities in nearly a dozen states, including California, Florida, Texas, Tennessee and New Mexico. The next-generation warheads will be larger and more stable than the existing ones but slightly less powerful, according to government officials. They might contain "use controls" that would enable the military to disable the weapons by remote control if they are stolen by terrorists.

Brooks said in an interview Thursday that, by

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November, his agency will choose between two competing designs submitted by teams at the Los Alamos and Lawrence Livermore national laboratories. Brooks said the November timetable for the submission of the design plans would give his agency time to develop preliminary cost estimates that could be included in the administration's fiscal 2008 budget, to be submitted to Congress early next year.

The Reliable Replacement Warhead Program, as it is called, was first proposed two years ago by Rep. David L. Hobson (R-Ohio). It has been adopted as part of a major restructuring of the U.S. nuclear weapons complex being proposed by the Bush administration in light of the findings of its 2002 Nuclear Posture Review.

The new warheads envisioned as part of the RRW are expected to be larger and heavier than those now deployed and in reserve, which originated from the Cold War years, when they needed to be light but still carry the maximum explosive yield for knocking out reinforced Soviet missile silos, submarine pens and underground command posts.

But this is just the beginning of a decades-long process of replacing the stockpile with smaller warheads. Even if the government meets its year-end deadline for choosing a feasible design for engineering development and production, Congress will still have to debate and approve the choice. After that, it would probably take almost 10 more years before the first new warheads appeared.

Though most U.S. nuclear weapons contain permissive action links, or "PALS," which need to be activated before they can be used, Brooks said that technological advances might provide security measures that are far superior.

"We want them to take advantage of 'use control' and are looking forward to get those designs," Brooks said. But he declined to discuss details.

Last week, Thomas P. D'Agostino, the NNSA's new deputy administrator for defense programs, told a House Armed Services subcommittee that the government has already added a number of safety features that would disarm a missile warhead in the event of a theft.

"If somebody should happen to lose control of a weapon itself, it would essentially not be a weapon because of the types of technology features we've inserted," D'Agostino said.

Officials say that plans for consolidating and downsizing nuclear weapons plants throughout the country are long overdue. Many of the buildings used for developing and assembling the weapons are almost 50 years old.

At the same time, there are plans to reduce the nuclear stockpile by as much as half -- to 3,000 or 4,000 warheads -- by 2012.

The competition between Los Alamos and Livermore replicates what happened beginning in the 1950s as each laboratory developed different nuclear warheads for the Air Force, the Navy and the Army. "The process is providing a unique opportunity to train the next generation of nuclear weapons designers and engineers," D'Agostino said last week.

During the Cold War years, from the 1960s through the 1980s, the U.S. nuclear weapons complex constantly designed, developed, produced and tested different warheads depending on military needs, D'Agostino said. Beginning in the 1990s, as the Cold War ended and a test ban pact between the United States and the Soviet Union was reached, a decision was made to halt U.S. development of new warheads and, instead, to shift to supervising the already enormous stockpile, to make sure that those deployed were still reliable and to begin dismantling those that were no longer

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needed.

The notion at that time, during the administrations of Presidents George H.W. Bush and Bill Clinton, was that the stockpile would go through a life-extension process every 20 to 30 years. The current Bush administration's Nuclear Posture Review changed that. Instead of just extending the life of older warheads with new but similar parts, the aim now is to make totally new components that are more robust, easier to manufacture, safer and more secure, while at the same time not requiring new underground testing.

By constantly upgrading the parts, D'Agostino said, a second goal will be accomplished. By 2030, he said, the "weapons design community that was revitalized by the RRW program will be able to adapt an existing weapon within 18 months, and design, develop and begin production of a new design within four years of a decision to enter engineering development."

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