

The Reliable Replacement Warhead Program

Summary: Congress rejected the NNSA's fiscal year 2005 \$9 million request for Advanced Concepts, an effort to design low-yield nuclear weapons and other possible new designs. Instead, Congress created the Reliable Replacement Warhead (RRW) Program, whose stated intent is to provide reliable components for existing nuclear weapons. The NNSA and the weapons labs may try in part to resurrect Advanced Concepts through RRW and are clearly seeking to transform the nuclear weapons "enterprise" through it. Moreover, RRW represents a "nukes forever" program, in violation of the 1970 NonProliferation Treaty (NPT). Nuclear Watch New Mexico recommends that Congress explicitly constrain the RRW Program to component replacements in existing weapons. Further, we recommend that independent funding for RRW be eliminated and component replacement take place under the existing and already amply funded Stockpile Systems Program. Finally, Congress should seriously consider how the RRW Program comports with the NPT and its likely negative example for discouraging global nuclear weapons proliferation.

The National Nuclear Security Administration (NNSA) is the semi-autonomous agency within the Department of Energy responsible for nuclear weapons programs. In fiscal year (FY) 2005 the NNSA asked Congress to fund \$9 million for its Advanced Concepts Initiative. This initiative was an effort to pursue "mini-nukes" and other exotic designs, an area of research re-opened only after a 10-year ban against studying more usable low-yield nuclear weapons was overturned in FY 2004 by Congress. Shortly after that repeal, Linton Brooks, the NNSA Administrator, wrote to the directors of the three nuclear weapons labs "We should not fail to take advantage of this opportunity."¹

In contrast, the House Appropriations Subcommittee on Energy and Water Development, chaired by David Hobson (R.- OH), rejected FY 2005 funding for Advanced Concepts. It reported:

The Committee notes that the management direction for fiscal year 2004 sent to the directors of the weapons design laboratories left little doubt that the objective of the program was to advance the most extreme new nuclear weapon goals irrespective of any reservations expressed by Congress... By contrast, the Committee's priorities are maintaining our Nation's nuclear deterrent in a safe and secure condition and maintaining our Nation's integrity in the international effort to halt the proliferation of weapons of mass destruction. The Department's obsession with launching a new round of nuclear weapons development runs counter to those priorities. The Committee directs the NNSA to focus wholly on its primary mission of maintaining the safety, security, and viability of the existing stockpile...²

Because the Senate failed to pass a number of appropriations bills in FY 2005, a Consolidation Appropriations Act was passed in House/Senate conference. In it, Congress redirected the NNSA's \$9 million request for Advanced Concepts and created the Reliable Replacement Warhead (RRW) Program, whose stated congressional intent is "to improve the reliability, longevity, and certifiability of existing weapons and their components."³

The NNSA has followed suit by requesting \$9.35 million for the program in the pending fiscal year 2006, with projected increased spending at \$97 million over the next five years. On April 4, 2005, at the start of the FY 2006 appropriations process, Linton Brooks, the NNSA Administrator, testified to the Senate Armed Services Committee:

As a result of these collective decisions [to miniaturize warheads during the Cold War to the detriment of "increased performance margins, systems longevity, and ease of manufacture"], it is becom-

ing increasingly difficult and costly to certify warhead remanufacture. The evolution away from tested designs resulting from the inevitable accumulations of small changes over the extended lifetimes of these systems means that we can count on increasing uncertainty in the long-term certification of warheads in the stockpile. To address this problem, we must evolve our strategy from today's "certify what we build" to tomorrow's "build what we can certify."

Brooks hints at a pending transformation of the U.S.'s nuclear weapons stockpile, including new designs, through RRW. As he testified, "we should be able to develop and produce by the 2012-2015 timeframe a small build of warheads in order to demonstrate that an RRW system can be manufactured and certified without nuclear testing." This is especially ironic in the absence of full-scale tests, given that the fundamental aim of the Comprehensive Test Ban Treaty⁴ was to cut off the further advancement of nuclear weapons.

Brooks went on to testify:

Today's Cold War legacy stockpile is the wrong stockpile from a number of perspectives... First, today's stockpile is the wrong stockpile *technically* [i.e., with too tight design margins]... Second, the legacy stockpile was not designed for longevity... The Cold War legacy stockpile may also be the wrong stockpile from a *military* perspective. The Nuclear Policy Review [NPR] identified a number of capabilities shortfalls in the existing arsenal that could undermine deterrence in the future. Specifically, the NPR suggested that current explosive yields are too high, that our systems are not capable against hard and deeply buried targets.⁵

Brooks' stated concern over stockpile uncertainty due to the evolution away from tested designs is precisely one of Nuclear Watch New Mexico's most serious concerns over the NNSA's aggressive schedule of nuclear weapons refurbishments and possible "improvements" under its Life Extension Programs.⁶ However, instead of maintaining already extensively tested weapons as close to their original design as possible, Brooks seems to reach the opposite conclusion that new designs may be needed (i.e., "build what we can certify"). The Bush Administration's 2002 Nuclear Posture Review expanded the rationale and targeting list for the use of U.S. nuclear weapons and called for the development of lower-yield nuclear weapons (perhaps even "mini-nukes") and the Robust Nuclear Earth Penetrator. The danger is that in pursuit of the Nuclear Posture Review's objectives, the NNSA may try to circumvent Congress's direction and resurrect Advanced Concepts through the Reliable Replacement Warhead Program.

The nuclear weapons labs are likely pushing the NNSA to twist the RRW Program from its original congressional intent. For example, the NNSA stated:

The [Los Alamos National Laboratory (LANL)] Nuclear Weapons Program brokered a RRW path forward with Laboratory Director Nanos. The Laboratory Director met with NNSA to address this issue and to gain support for RRWs... The Laboratory worked with NNSA on *future stockpile strategies*. Directed Stockpile Work (DSW)⁷ developed and is maintaining a set of computer codes to address *future stockpile options*, which are being used by the Department of Defense and Department of Energy nuclear communities.⁸

In April 2005 the Nevada Test Site's former manager and now Principal Associate Director for Nuclear Weapons Programs at Los Alamos wrote of the RRW Program to Lab employees "I hope this will be the heart and soul of the weapons program for the next decade."⁹

Finally, plans for transforming the nuclear weapons stockpile and "sustaining the nuclear weapons enterprise" are made explicit in a study called just that, "Sustaining the Nuclear Enterprise – A New Approach." This May 2005

study, authored by personnel from the three nuclear weapons labs, prominently displays the statement “We concur with the assessment and strategy expressed in this paper,” signed by the heads of the nuclear weapons programs at the Lawrence Livermore, Los Alamos and Sandia National Laboratories. Some relevant excerpts are:

... the current application of SSP [Stockpile Stewardship Program¹⁰] looks increasingly unsustainable... This vision of sustainable warheads with a sustainable enterprise can best be achieved by shifting from a program of warhead refurbishment to one of warhead replacement. ...the current application of SSP neither preserves the competencies nor transfers the knowledge needed to design, develop, and manufacture replacement warheads of significantly different design... the warhead designs that drive the enterprise must change... The enterprise must soon begin the shift to the production of reliable replacement warheads for existing (or subsequent) DoD delivery systems... The nuclear weapons stockpile and the nuclear weapons enterprise should transform together to achieve this vision... If it succeeds, the United States, the NNSA and the DoD should have a sound basis for meeting today’s and tomorrow’s nuclear weapons requirements.¹¹

Present Status of RRW: In April 2005, Nuclear Watch and the Alliance for Nuclear Accountability visited Congressional offices arguing that the RRW Program should be constrained to the replacement of components within existing nuclear weapons. Subsequently, the House and Senate Armed Services Committee authorized the NNSA’s FY 2006 \$9.35 million request for RRW. However, both sets of authorizers included language specifying that RRW is to lead to a smaller stockpile and reduce the need for future full-scale testing. The House Armed Services Committee reported that the “the Reliable Replacement Warhead program should serve as a complement to, and potential future replacement for, the existing Life Extension Programs.”¹²

The House Appropriations Committee went further, funding RRW with \$25 million, but reporting:

The Committee’s qualified endorsement of the RRW initiative is based on the assumption that a replacement weapon will be designed only as a re-engineered and remanufactured warhead for an existing weapon system in the stockpile. The Committee does not endorse the RRW concept as the beginning of a new production program intended to produce new warhead designs or produce new weapons for any military mission beyond the current deterrent requirements.¹³

The Senate Appropriations Committee raised the House Appropriations Committee’s recommendation to \$25.35 million, but stated that the RRW Program is not to be for a new nuclear weapon. Final funding for the RRW is now to be decided in House/Senate Appropriations conference, expected beginning mid-July 2005.

Problems with RRW: Nuclear Watch New Mexico fears that the NNSA’s and the labs’ embrace of the RRW Program is a Trojan horse. Congress, when it reprogrammed Advanced Concepts money, sought to create a program that would help ensure the safety and reliability of existing U.S. nuclear weapons. We fear that the NNSA and the labs will turn the program into a pending fourth generation of nuclear weapons of mini-nukes and other exotic designs. Further, the development of any possible new designs under RRW could increase pressure to return to full-scale nuclear weapons testing.

In any event, the Reliable Replacement Warhead Program can all too easily become a “nukes forever” program. The NonProliferation Treaty (NPT) obliges all signatories to negotiate in good faith for the elimination of nuclear arsenals. A program designed to indefinitely preserve nuclear weapons is contrary to that mandate. This issue is yet more urgent after the recent failure of the 2005 NPT Review Conference, at which the U.S. refused to allow even discussion of the 13 practical steps toward disarmament that it and the other NPT declared nuclear powers agreed to in 2000.

A key argument used for RRW is that it is necessary for training new nuclear weapons scientists, but there is already ample funding for that. Moreover, there appears to be a strong self-interest in which maintaining the “enterprise” is seemingly given as much weight as maintaining nuclear weapons.

Recommendations: Congress must be diligent that the RRW Program truly meets congressional intent by being limited to the replacement of components in existing U.S. nuclear weapons. It must not be used as an excuse to produce new and/or improved weapons. Further, independent funding for the RRW Program should be eliminated. Nuclear Watch New Mexico advocates for a truly custodial stewardship program for the U.S.’s nuclear stockpile while it awaits eventual dismantlement under the framework of the NPT, along with all other nuclear powers. The stated congressional intent to provide reliable replacement components (but not new designs) should take place under “Stockpile Systems.”¹⁴ This would help prevent RRW from supporting a permanent U.S. nuclear arsenal in violation of the NonProliferation Treaty, further restrain the NNSA from using it to push for new nuclear weapons designs, and result in savings of a projected \$97 million through 2010. More broadly, Congress should consider whether the RRW Program aligns with international obligations under the NonProliferation Treaty and whether it truly advances our urgent national security need to discourage nuclear weapons proliferation by concrete and positive example.

Jay Coghlan 7/11/05

(Endnotes)

- 1 Linton Brooks, NNSA Administrator, memo to the three lab directors, 12/3/03, <http://www.nukewatch.org/importantdocs/resources/Linton.pdf>.
- 2 Report on FY 2005 Energy & Water Development Appropriations bill, House Rpt. 108-554, page 115.
- 3 Conference Report 108-792 “Making Appropriations for Foreign Operations, Export Financing, and Related Programs for the Fiscal Year Ending September 30, 2005, and for Other Purposes,” 11/19/04.
- 4 The U.S. was the first country to sign the Comprehensive Test Ban Treaty under President Clinton, but the Senate refused to ratify it. The U.S. has been observing a testing moratorium since 1992, instituted by the first President Bush.
- 5 All Brooks quotes are from the Statement of Ambassador Linton F. Brooks before the Senate Armed Services Committee, 4/4/05, <http://www.nnsa.doe.gov/>. Emphases are in the original.
- 6 “The Life Extension Program has been developed to extend the stockpile of a warhead or warhead components at least 20 years, with a goal of 30 years.” (NNSA FY 2006 budget request.) This is done through refurbishments and exchange of “limited life components.” In at least one case, military capabilities were reportedly “improved” by giving the W76 (the most common warhead in the U.S. arsenal) a new fuse with near-surface burst capability, increasing its lethality. Life Extension Programs have a current funding request of \$348.3 million and \$1.49 billion over the next five years.
- 7 DSW is a NNSA budget category for hands-on nuclear weapons work that includes Life Extension Programs.
- 8 FY 2004 Annual Performance Appraisal of the University of California’s Management and Operation of Los Alamos National Laboratory, NNSA, 2/25/05, p. 23-24, emphases added.
- 9 LANL Newsletter, April 25, 2005.
- 10 The Stockpile Stewardship Program was created in 1995 for the purported purpose of maintaining nuclear weapons safety and reliability in the absence of full-scale tests. However, in our view, it has been anything but a purely custodial maintenance program. Under so-called Stockpile Stewardship, DOE nuclear weapons budgets have climbed to today’s levels (\$6.6 billion in FY 2005), a full 50% above the Cold War average. For nuclear weapons labs personnel to state that Stockpile Stewardship looks increasingly unsustainable has long reaching implications and underscores how the RRW program has the potential to radically change both the stockpile and the nuclear weapons complex.
- 11 Sustaining the Nuclear Enterprise – A New Approach, O’Brien et al, 5/20/05, www.nukewatch.org.
- 12 Report on the National Defense Authorization Act for Fiscal Year 2006, H. Rpt 109-89, p. 465.
- 13 Report on Fiscal Year 2006 Energy & Water Development Appropriations Bill, House Rept. 109-86, p. 130.
- 14 Stockpile Systems is a budget subcategory under Directed Stockpile Work. It exists because “[e]ach weapon type in the stockpile requires routine maintenance; periodic repair; replacement of limited life components; surveillance to assure safety, security and reliability; and other support activity.” (NNSA FY 2006 budget request.) In our view, Stockpile Systems is as close as the NNSA gets to a purely custodial program of just maintenance. It too enjoys ample funding with \$311.8 million slated for FY 2006 and \$1.75 billion over the next five years.