

The Reliable Replacement Warhead Program

(Updated Insert to July 2005 Fact Sheet)

In May 2005 three authors from the Lawrence Livermore, Los Alamos and Sandia National Laboratories released a report named “Sustaining the Nuclear Enterprise – A New Approach.” Remarkably, it was signed on the title page by the directors of the three labs’ nuclear weapons programs under the statement “We concur with the assessment and strategy expressed in this paper.” Some relevant excerpts are:

... the current application of SSP [the Stockpile Stewardship Program] looks increasingly unsustainable... The goal of this [new] approach is to achieve a more affordable, sustainable, and responsive enterprise... 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 nuclear weapons stockpile and the new enterprise should transform together to achieve this vision....

... 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... Further, this path neither preserves nor fully exercises the design expertise and manufacturing capabilities necessary to be able to respond to evolving or emerging threats... In order to transform the enterprise in this way, the warhead designs that drive the enterprise must change... A path that allows the nuclear weapons enterprise to shift from refurbishment to replacement must be found. 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.

The nuclear weapons labs are strongly lobbying for RRW:

The Nuclear Posture Review (NPR) and the new U.S. National Security set new goals for the nation’s nuclear forces... The team [Reliable Replacement Warhead Concept Development Team] has been successful in convincing NNSA, DoD and Congress that the successive refurbishment of Cold War legacy warheads is not the right path for the nation’s long-term nuclear future but that development of replacement warheads (that are easier to manufacture and certify) will ensure the long-term safety and reliability of the nation’s stockpile. The [RRW] is anticipated to represent a major advancement for credibly sustaining the nuclear deterrent in the 21st century. This team was instrumental in getting RRW on the national agenda. (“Distinguished Performers, Large Teams,” 8/15/05 LANL Newsletter.)

In July the Secretary of Energy Advisory Board (SEAB) issued a draft final report entitled “Recommendations for the Nuclear Weapons Complex of the Future.” The SEAB was mostly concerned about geographically consolidating special nuclear materials (plutonium and highly enriched uranium) at DOE sites in order to lessen post-9.11 terrorist threats. However, absolutely central to its recommendation was that the RRW program would and should enable that future consolidation. Some relevant excerpts are:

The plutonium pits in the current nuclear stockpile were manufactured between 1978 and 1990 so the “youngest” pit in the stockpile is 15 years old in 2005. The best estimates from the nuclear

design laboratories are that pits will remain functional for a minimum of 45 – 60 years. Thus the entire stockpile may need to be “turned-over” by 2035 to 2050 depending on the acceptable level of uncertainty in pit lifetime...

A transition strategy emerging from the DoD would put the nation on a new path toward the sustainable stockpile. This strategy, already endorsed by the Nuclear Weapons Council, is based on the RRW concept... Its introduction is made possible by segmenting the current LEPs [Life Extension Programs] into discrete “blocks.” Block 1 would incorporate the current LEP design but would be truncated much sooner than normally planned and transitioned to the block 2 design (RRW-1), which would include some, but probably not all, attributes of the future stockpile. As soon as practical, block 2 would be transitioned to block 3 (RRW-2), which would incorporate all the attributes of the future stockpile. Implementation of this RRW block change strategy, system by system, would ensure a smooth transition to a sustainable nuclear stockpile, and eventually to a stockpile designed for modern deterrence... In addition, the RRW will propel the transformation of the Complex into the agility and responsive Complex of the future.

... the Task Force recommends the following action as a key building block for transforming the Stockpile:

1. Immediate design of a Reliable Replacement Warhead

The Task Force endorses the immediate initiation of the modernization of the stockpile through the design of the Reliable Replacement Warhead. This should lead to a family of modern nuclear weapons, designed with greater margin to meet military requirements while incorporating state-of-the-art surety requirements... The Task Force recommends that a new version of the RRW, incorporating new design concepts and surety features, initiated on planned five-year cycles. This family of weapons will form the basis of the sustainable stockpile of the future.

However, contrary to media reports, when the full SEAB met to consider the Task Force’s recommendation, it accepted the general recommendation to consolidate special nuclear materials, but refrained from endorsing the related RRW recommendation. In the words of two Nobel laureates on the SEAB, “If we do this [endorse RRW], it has world-wide consequences, and it’s going to stir up some kind of hornet’s nest...” and “What is the effect on non-nuclear nations and our allies? What is the effect on China or Russia? What will be the influence on the true security of our nation?” (Burton Richter and Leon Lederman, “Advisors Back plan to kill Superblock,” Ian Hoffman, Inside Bay Area, 10/5/05.)

Conclusions and Recommendations: Because of Congress’s current inability to pass all appropriations bill and the need for a Continuing Resolution to finance the federal government, funding for RRW in Fiscal Year 2006 remains uncertain. Congress must be diligent that the 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” that is already slated for \$311.8 million in FY 2006 and \$1.75 billion over the next five years. 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 10/17/05