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New Hydrogen Bomb Endangers Human Life and Health

On March 2, 2007, the U.S. Government selected a design for the first new American hydrogen bomb in two decades without public consideration or careful study of how it will affect public health and international security. The so-called "Reliable Replacement Warhead" is unnecessary, enormously expensive, dangerous to workers and communities involved in its production, and damaging to international efforts to prevent the spread of nuclear weapons.

"We will pay a very high price in terms of our overall national security if Congress gives the approval to go forward with this program." – former Senate Armed Services Committee Chairman Sam Nunnⁱ

A New Hydrogen Bomb Encourages Nuclear Proliferation

- **Sets a Dangerous Example:** If the world's largest military power builds a new hydrogen bomb, other countries will follow our example. As George Schultz, William Perry, Henry Kissinger and Sam Nunn wrote in the *Wall Street Journal* in January: "the world is now on the precipice of a new and dangerous nuclear era... we endorse setting the goal of a world free of nuclear weapons and working energetically on the actions required to achieve that goal."ⁱⁱ
- **Undermines the NPT:** New nuclear weapons are especially damaging to the global nonproliferation norm, as countries without nuclear weapons make clear at each review of the Nuclear Non-Proliferation Treaty (NPT) through which the United States is legally committed "to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament."ⁱⁱⁱ

A New Hydrogen Bomb Endangers Workers and Communities

- **Massively Destructive:** Hydrogen bombs contain explosive triggers employing nuclear fission to initiate the nuclear fusion of hydrogen, producing an explosion up to more than a thousand times as powerful as the atomic bombs dropped on Japan. One hydrogen bomb detonated in a major city could kill and injure millions of people and a regional war involving 100 nuclear weapons "would generate substantial global-scale climate anomalies."^{iv}
- **Built from Radioactive and Toxic Materials:** Materials used in the production of hydrogen bombs include: radionuclides of uranium, plutonium, americium, cesium and strontium; toxic metals such as mercury, chromium, beryllium, polonium and lead; organic solvents including benzene, toluene and trichloroethylene; chlorinated hydrocarbons; and chelating agents – each represents potential threats to workers and nearby communities. PSR's 1992 study *Dead Reckoning* found "an inescapable conflict between the goals of nuclear weapons production and those of public, occupational and environmental health."^v

A New Hydrogen Bomb Requires Huge and Unjustified Expenses

- **Enormously Expensive:** The Bush Administration's FY 2008 request for \$118.8 million for design of the new hydrogen bomb before the production phase begins in 2009 is the tip of the iceberg. DOE proposes to modernize its entire nuclear weapons production capacity through its so-called "Complex 2030" plan, with poorly estimated costs likely to run above \$150 billion.^{vi} U.S. taxpayers already spend \$54 billion annually on our nuclear arsenal.^{vii}
- **Unnecessary:** The new hydrogen bomb has no new military capabilities – its purpose is to demonstrate and refine the U.S. capability to produce new nuclear weapons. Claims of a need for additional safety features raise questions about why we have not dismantled more of our existing thousands of hydrogen bombs and agreed with Russia and others to move remaining nuclear weapons off high alert to prevent accidental or unauthorized detonation.

“We could defer action for many years on an RRW program...this would put us in a stronger position to lead the international community in the continuing battle against nuclear proliferation” – former Defense Secretary Bill Perry^{viii}

Five Myths about the New Hydrogen Bomb

1. *The Existing Nuclear Arsenal isn't “Reliable”*: “Reliability,” as it is used by DOE, includes the exact size of the blast – not whether or not a weapon will detonate. For the last decade, the U.S. nuclear arsenal has been certified annually by the Secretaries of Defense and Energy to meet this exacting standard.^{ix} The claim that nuclear weapons are sharply more unreliable at the beginning and end of their “lives” (so that their unreliability plotted over time resembles a “bathtub”) is unsubstantiated and made without reference to the December 2006 report by the JASONS, a panel of independent scientists consulting to DOE, which concluded that the plutonium cores of most nuclear weapons would last more than 100 years.^x
2. *The New Hydrogen Bomb isn't “New”*: DOE's claims that the new hydrogen bomb is not new because it lacks new capabilities and will be incorporated into existing “weapon systems” have been termed “distinctly Orwellian” by Arms Control Association Executive Director Daryl Kimball. The proposed device is of a new design, meeting all the criteria of a thermonuclear weapon: therefore it is a **new** hydrogen bomb.
3. *The New Hydrogen Bomb is Necessary to Maintain Expertise at the National Laboratories*: The U.S. National Laboratories convene scientific ingenuity and research capacity on an unprecedented scale. The National Laboratories should focus on the most urgent scientific problems facing the United States: how to break America's addiction to fossil fuels, stop global warming, dismantle the massive over-kill capacity of our existing nuclear arsenal, and clean up the toxic legacy of the Cold War. DOE estimates that clean up of the existing nuclear weapons complex will cost between \$189 billion and \$265 billion.^{xi}
4. *The New Hydrogen Bomb will never be Tested*: Replacing tested hydrogen bombs with untested new designs will lead to calls for nuclear explosive testing – resumed testing would likely be imitated by Russia, China, and others.
5. *Design Work is Harmless*: Any funding for a new hydrogen bomb sends the wrong message to our allies and adversaries and spurs lobbying by defense contractors. As Representative Pete Visclosky (D-IN) observes of another DOE plan, “once that shovel is in the ground, there is a constituency for it and we cannot take it away.”^{xii}

REFERENCES:

ⁱ Sam Nunn, Testimony before the Subcommittee on Energy and Water Development, House Appropriations Committee, 3/29/07

ⁱⁱ George P. Schultz, William J. Perry, Henry A. Kissinger, and Sam Nunn, “A World Free of Nuclear Weapons,” *Wall Street Journal*, 1/4/07, p. A-15 online: <http://www.psaonline.org/downloads/nuclear.pdf>

ⁱⁱⁱ Text of the Treaty on the Non-Proliferation of Nuclear Weapons, online: <http://www.fas.org/nuke/control/npt/text/npt2.htm>.

^{iv} Owen B. Toon, Alan Robock, Richard P. Turco, Charles Bardeen, Luke Oman, Georgiy L. Stenchikov, “Consequences of Regional-Scale Nuclear Conflicts,” *Science*, 3/2/07, Vol. 315 pps. 1224-5.

^v The Physicians Task Force on the Health Risks of Nuclear Weapons Production, *Dead Reckoning: A Critical Review of the Department of Energy's Epidemiologic Research* (Washington: Physicians for Social Responsibility) 1992 pages 9, 19-20.

^{vi} Gene Aloise, “Views on Proposals to Transform the Nuclear Weapons Complex,” Testimony before the Subcommittee on Energy and Water Development, House Appropriations Committee, 4/26/06, p. 13, online: <http://www.gao.gov/new.items/d06606t.pdf>

^{vii} Steven M. Kosiak, *Spending on U.S. Strategic Nuclear Forces*, Center for Strategic and Budgetary Assessments, 2006 p. i., online: http://www.csbaonline.org/4Publications/PubLibrary/R.20060901.Spending_on_US_Str/R.20060901.Spending_on_US_Str.pdf

^{viii} William Perry, Testimony before the Subcommittee on Energy and Water Development, House Appropriations Committee, 3/29/07

^{ix} Robert W. Nelson, “If it Ain't Broke: The Already Reliable U.S. Nuclear Arsenal,” *Arms Control Today*, 4/06, online:

http://www.armscontrol.org/act/2006_04/reliablefeature.asp

^x The JASONS, PIT Lifetime, JSR-06-335, 1/11/07, p. 1. online: <http://www.fas.org/irp/agency/dod/jason/pit.pdf>

^{xi} U.S. Department of Energy, *1996 Baseline Environmental Management Report*, online:

<http://www.em.doe.gov/bemr/BEMRPages/execsum96.aspx>

^{xii} Remarks before the House Appropriations Subcommittee on Energy and Water Development, and Related Agencies Hearing on the Administration's FY 2008 Budget Proposal for DOE, 3/6/07.

Physicians for Social Responsibility was founded in 1961 by physicians concerned about the growing threat of the nuclear arms race and continues to be guided by the values and expertise of medicine and public health in working to protect human life from the gravest threats to health and survival.

For more information, contact Doug Shaw, Director of Security Programs at Physicians for Social Responsibility at 202-667-4260 extension 225 or by email at dshaw@psr.org.