

# Los Alamos Study Group

## ►► Information Alert ◀◀

September 22, 1995

### Earth-Penetrating Nuclear Weapon To Be Developed by the United States

Recent Department of Energy (DOE) and weapons laboratory statements reveal that an earth-penetrating nuclear weapon, to be fashioned from the B61 gravity bomb, is under development in the United States.

#### Key Issues of Concern

- The modified B-61, if developed and deployed, would apparently have characteristics distinct from any other weapon in the arsenal; these characteristics would allow it to threaten otherwise indestructible targets. This makes the new weapon uniquely useful from a military perspective--and hence provocative from an arms control perspective.
- A central purpose of the proposed comprehensive test ban (CTB) has always been to stop the further evolution of the world's nuclear arsenals. This modified weapon, to be developed and deployed after the U.S. has stopped nuclear testing, undercuts a CTB before it is even signed. New or "modified" nuclear weapons are not in the security interests of the United States.
- Earth-penetrating weapons, approved for development by Clinton in the post-Cold War era, were rejected for deployment by Carter, Reagan, and Bush. What are the new targets? What little is known about this weapon suggests that it is more oriented against deeply-buried targets in the Third World than was its 9-megaton predecessor, the B53. Why is the United States further developing its weapons of mass destruction? It is in our manifest interest to get rid of such weapons as fast as possible and to quit their further legitimization.
- Retirement of the B53, which never met modern safety standards, was halted by President Reagan in 1987. The DOE is attempting to justify the new weapon by saying it is "safer" than the old B53. It is much less safe, however, than once and for all retiring the B53 without replacement.
- Development of this weapon was approved outside the regular budget process and without congressional debate, by means of secret letters to key committee chairmen.
- In their efforts to gain acceptance for the advanced design facilities of the science-based stockpile stewardship program, Clinton Administration officials and laboratory spokespersons have for years assured the public that no new nuclear weapons would be developed or built. At the very same time, secret development of this provocative weapon was being requested by the

Pentagon and the DOE in complete secrecy.

- In order to gain support for indefinite extension of the Nuclear Nonproliferation Treaty, the United States repeatedly assured the world in April and May of this year that it would not continue "vertical proliferation." During these same months the Department of Energy was seeking, and obtaining, approval for a weapon modification with significant new military utility.
- The DOE claims that this weapon, with its unique new military characteristics, is not a new weapon but rather a minor modification of an existing weapon. Lab spokespersons admit that other "modifications" are now in the works or planned for the future. What are these?
- The modification in question is purported to involve primarily the nonnuclear components of the bomb. Yet the labs maintain that in the future, modifications will be made to the nuclear components as well. Since none of these modifications can or should be tested, why is it a prudent idea to continue to change the weapons? Allowing these changes to be made could easily, over time, result in calls for the resumption of nuclear testing.
- Continued modification of the U.S. stockpile is expensive. While this particular project may or may not be expensive in itself, the DOE's \$3 billion construction plans to build new nuclear test simulators, plus its planned Cold-War-level nuclear weapons program funding, is largely driven by the proclaimed "need" to maintain the capability to develop new warheads and bombs.

## Background

In early September, 1995, the DOE and its three nuclear weapons labs released a revised version of a report about their nuclear stockpile surveillance program.<sup>1</sup> This report contained a footnote on page 11 which reads:<sup>2</sup>

A modification of the B61 is expected to replace the B53 by the year 2000. Since this modification of the B61 is not currently in the stockpile, there is no Stockpile Evaluation data for it. The B61-7 data can be used to represent this weapon.

A previous statement by Dr. Don Wolkerstorfer, Above-Ground Experiments I (AGEX I) Program Manager, Nuclear Weapons Technology Program, Los Alamos National Laboratory (LANL), which was broadcast by radio station KSFR in Santa Fe, NM on July 18, 1995, shed light on this modification:

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<sup>1</sup>*Stockpile Surveillance: Past and Future*, Kent Johnson et. al.

<sup>2</sup>This is the text of the report given to Hisham Zerriffi of the Institute for Energy and Environmental Research on September 13, 1995 at Los Alamos. The subsequent edition of the report was modified by the DOE to read simply: "A modification of the B61 is expected to replace the B53. The B61-7 data can be used to represent this weapon." The omitted material is significant.

The services are looking at redeploying an existing weapon in such an earth penetrating warhead to address hardened targets, that's exactly right. The hope is to replace the high yield B53, which has some safety problems...

The B53 is a 9-megaton gravity bomb first placed in service in 1960. Retirement of early versions began in 1967, but later versions of this bomb remained in the arsenal until 1987, when retirements were halted and retired (but still assembled) bombs were brought back into the active stockpile. The B53 can be a surface-burst but not an earth-penetrating weapon.<sup>3</sup> It lacks complete electrical safety. There are thought to be 50 of these weapons in the stockpile.<sup>4</sup>

The B61-7 is a more recent strategic bomb in the stockpile. It has a selectable yield of 10 to 350 kilotons. The original B61 first entered the stockpile in 1968; the "mod 7" was first placed in service in 1985. The B61-7 can be fuzed for air or surface burst and has "a hardened ground-penetrator nose" with a retarded contact burst fuzing option. It can be dropped with or without a parachute. There are thought to be 750 of these bombs in the active stockpile, along with 800 other kinds of B61 bombs.<sup>5</sup>

Lab spokespersons say the development of the modified warhead will take two years, and will be done primarily at Sandia. Development, but not deployment, has apparently been approved.<sup>6</sup>

The percent of blast energy converted into shock waves in the earth is extremely sensitive to the depth of the blast. Thus even a small increase in earth penetrating capability can greatly affect the military utility of a nuclear weapon to hold deeply buried and hardened targets at risk. Hardening of the B61 to allow very high altitude release, with consequent high velocity ground impact, apparently provides such an increase in capability.

The B61 has been "modified" into more than one new weapon in the past; one such weapon was the W85 Pershing II missile warhead.<sup>7</sup>

DOE's classified request to reprogram \$3.3 million in funds within its Atomic Energy Defense Weapons Activities account was dated April 18, 1995 and was sent to the following committees:

- House Energy and Water Development Appropriations Subcommittee (approval from Tom Bevill and John Myers, 5/15/95);

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<sup>3</sup>History from Chuck Hansen, *U.S. Nuclear Weapons: The Secret History*, Orion Books, 1988.

<sup>4</sup>Tom Cochran, "U.S. Inventories of Nuclear Weapons and Weapon-Usable Fissile Material," Natural Resources Defense Council, September 15, 1995.

<sup>5</sup>Quote and descriptive information in this paragraph are from Hansen, *op. cit.*; stockpile numbers are from Cochran, *op. cit.*

<sup>6</sup>"Old nuclear warheads get new life," Jonathan Weisman, *Tri-Valley Herald* (Livermore, CA), 9/21/95.

<sup>7</sup>See Hansen, *op. cit.*

- House National Security Committee (approval from Floyd Spence and Ronald Dellums, 6/29/95);
- Senate Armed Services Committee (approval from Strom Thurmond, 7/19/95); and
- Senate Energy and Water Development Appropriations Subcommittee (approval from Pete Domenici, 6/12/95).<sup>8</sup>

### **For further information**

This alert was prepared by Greg Mello of the Los Alamos Study Group. Other information and perspectives can also be obtained from Jay Coghlan of Concerned Citizens for Nuclear Safety (505-986-1973), Daryl Kimball of Physicians for Social Responsibility (202-898-0150), Chris Paine of the Natural Resources Defense Council (202-783-7800), or Simon Whitby of the British-American Security Information Council (202-785-1266).

### **Attachments**

1. "Old warheads get new life," Jonathan Weisman, *Livermore Tri-Valley Herald*, 9/21/95.
2. "Activists accuse LANL of creating new nuclear bomb," Nancy Plevin, *The New Mexican*, 9/22/95.
3. "Sandia redesigns N-bomb," John Fleck, *Albuquerque Journal*, 9/22/95.
4. "Burrowing nuclear warhead will take out the atomic trash," Jonathan Weisman, *Oakland Tribune*, 9/22/95.
5. B61-11 fact sheet from DOE Defense Programs, 9/21/95.

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<sup>8</sup>Approval letters are on file at DOE Defense Programs.

# Los Alamos Study Group

## Press and Action Alert

December 15, 1995

For Immediate Release

Contact: Greg Mello, 505-982-7747

## **Senate Strangeloves Threaten Critical Arms Control Treaty Bingaman's Leadership Decisive Up to Now--Where's Domenici?**

Senators Robert Smith (R-NH) and Jon Kyl (R-AZ) may succeed this week in killing the START II Treaty, setting back arms control negotiations between the U.S. and Russia by several years. Prompt Senate action is needed to ratify the popular treaty, which is expected to quickly pass the Senate by more than 90 votes if it is ever finally brought to a vote. Last week, Senator Bingaman successfully filibustered Republican legislation in order to pry the treaty out of Jesse Helm's Foreign Relations Committee, where it passed by an 18-0 vote. In forcing Helms to act, Senate Republican leadership assured the bi-partisan supporters of the treaty that it would be brought to a vote on the floor before the Christmas recess.

At stake are 4,500 deployed nuclear weapons in Russia now aimed at the United States and the same number in this country aimed at Russia. Thus a total of 9,000 weapons are slated to be dismantled if the treaty is ratified by both countries, leaving each side with 3,500 deployed strategic warheads (plus their remaining tactical nukes and thousands of so-called "reserve" weapons). Prompt ratification by the United States is generally thought to be necessary, though not sufficient, for Russian ratification of START II.

Senator Bingaman has received well-deserved praise from the editorial pages of the State's newspapers for his leadership on this issue, which has been critical. Senator Domenici, who has a large voice in determining what matters are considered on the Senate floor, has by contrast been completely silent. "Where's Senator Domenici? Does he want all those warheads to remain in the world's arsenals?" asked Greg Mello of the Los Alamos Study Group, a disarmament and environmental-protection organization in Santa Fe. "Passing this popular treaty will reflect well on both parties and they should do it now, before the Presidential election heats up next year."

Many experienced congressional observers believe that if the treaty does not pass next week, it will be dead until 1997. Given the eroding situation in Russia, this could mean that Cold War-sized nuclear arsenals remain in both countries for the foreseeable future, each weapon a potential holocaust. If Senators Kyl and Smith are allowed to kill a hard-won agreement that gave the world hope that the curse of nuclear terror might some day be lifted, it will be a cruel Christmas present indeed.

**Dear Colleagues: Please call Sen. Domenici (202-224-6621) and tell him to get START II to the floor early next week! If you can, call Sen. Dole (202-224-6521) as well. Your call counts!**