

WASHINGTON REPORTS

Senate Rejects Comprehensive Test Ban Treaty, Evoking Defeat of Versailles Treaty 80 Years Ago

The Senate's rejection of the Comprehensive Test Ban Treaty (CTBT) on 13 October is certain to resonate throughout the world. The vote, 51 to 48 against the treaty, set back an effort that stretches back to President Eisenhower, who sought to control the spread of nuclear weapons by prohibiting all tests and to lock in the US advantage in nuclear technology at the time. The treaty fell 19 votes short of the two-thirds majority necessary for ratification—though four Republicans joined 44 Democrats in approving the treaty.

It was the first time the Senate had defeated a major international accord since the Treaty of Versailles, creating the League of Nations, was voted down in November 1919, at the conclusion of World War I. In March 1920, the Senate had another opportunity to ratify the treaty that President Wilson had put before it, and failed to do so, with far-reaching historic implications. The Senate's defeat of the CTBT was described in a *New York Times* editorial as "a destructive abdication of American leadership on arms control and other international issues."

President Clinton, speaking on the White House lawn, denounced the Senate's vote as a "reckless" and "partisan" action, and said that he would continue to pursue a total ban on nuclear testing. "I assure you, the fight is far from over," he stated. "When all is said and done, the United States will ratify the treaty."

Clinton was the first to sign the CTBT in a ceremony at the United Nations on 24 September 1996. The treaty was to be the cornerstone of worldwide arms control efforts, banning nuclear tests conducted underground. So far the treaty has been signed by 154 nations, including the five major nuclear powers. But only 26 of the 44 nations with nuclear capabilities have ratified it. Only when all 44 act, including the US, of course, can the CTBT take effect. Russia and China have not yet ratified the treaty, and their leaders have indicated that they will follow the lead of the US.

Prior to the vote, both Republicans and Democrats acknowledged that the Senate would reject the treaty.

Clinton and the leaders of Britain, France, and Germany urged the Senate to postpone the vote. They argued that the treaty's demise would not only cause the US a diplomatic humiliation, but would send an ominous message to countries with emerging nuclear weapons programs, such as India, Pakistan, Iran, Iraq, and North Korea.

Opponents of the treaty argue that without the option to test, the safety and reliability of the nuclear stockpile cannot be assured as the weapons age, corrode, and otherwise deteriorate; that the phrase "nuclear weapon test explosion" is not specifically defined in the text; and that small underground tests cannot be reliably detected and verified. Moreover, say opponents, including five former US defense secretaries, no treaty can stop a wanna-be nation from designing and building a simple nuclear weapon with confidence that it will work without a prior test. One of the US bombs dropped on Japan in 1945 was of a design that had not been tested, and South Africa built six nuclear weapons without testing.

Proponents of the CTBT, including the Joint Chiefs of Staff, were aided in their cause by a letter signed by 32 Nobel Prize-winning physicists who called ratification "imperative." The letter, organized by Jerome Friedman of MIT, president of the American Physical Society, declared the treaty "central to future efforts to halt the spread of nuclear weapons." The directors of the three nuclear weapons labs testified before Senate committees that weapons in the stockpile could be monitored and, if necessary, remanufactured by the use of computer simulations, zero-yield tests, and understanding gained through the National Ignition Facility, now under construction at the Lawrence Livermore National Laboratory.

A statement released jointly by the American Geophysical Union and the Seismological Society of America a week before the Senate vote expressed confidence that the worldwide monitoring network the treaty provides for, including 170 seismic stations, would meet the verification requirements. **IRWIN GOODWIN**

Krebs Steps Down as Science Chief of DOE, Breaking Longevity Record

Martha Krebs, the longest-serving director of scientific research at the Department of Energy, informed President Clinton, Energy Secretary Bill Richardson, and her staff on 23 September that she intends to leave the government in early December. Krebs, who was named by Clinton in July 1993 to be director of DOE's Office of Energy Research and was confirmed by the Senate a month later, surpassed Alvin Trivelpiece's record of nearly six years in the job. Trivelpiece left the department in 1987 and now heads Oak Ridge National Laboratory. He telephoned Krebs in August to congratulate her on surpassing his mark. Most research directors at DOE and its predecessor, the Atomic Energy Commission, usually stayed in the post for two or, at most, three years.

In a three-page, single-spaced letter to Clinton, Krebs wrote of her "deep honor" in serving him and a

succession of DOE secretaries—Hazel O'Leary, Federico Peña, and Richardson. Krebs reminded Clinton that DOE's Office of Science (as it was renamed last year) carries out one of the major federal investments in basic research. With an annual budget of about \$3 billion, it supports most of the fundamental science capabilities at the department's national labs and much of the research done at leading universities. She boasted that the office had been the primary source of funding for many Nobel Prizes and the largest federal source for the physical sciences.

"In particular," she noted, "your administration can claim a record of delivering the highest of high technology on schedule, within budget, and with a level of performance that enables American scientists to lead the world in many fields." Krebs went on to express her satisfaction at the completion of the Fermilab Main