

US Senate ignores scientific advice in failing to ratify test ban treaty

Researchers presented data that supports signing the test ban treaty, but they found that most politicians had already made up their minds.

Washington

When the US Senate announced on 1 October that it would vote on the Comprehensive Test Ban Treaty within 12 days, senior researchers with a stake in the treaty wasted little time.

Frank Von Hippel, professor of public and international affairs at Princeton University, and Ray Kidder, a physicist at the Lawrence Livermore National Laboratory in California, travelled to Washington early the following week, seeking moderate Republican 'swing senators' whom, they thought, would determine the outcome of the debate. They were in for a surprise. "We couldn't find any," Hippel laments. "The result was already stitched up."

Others lobbying for treaty ratification were similarly frustrated. Two key technical issues underpin the US debate: whether seismologists can verify that other countries do not cheat, and whether the scientific stockpile-stewardship programme can ensure the safety and reliability of US nuclear weapons in the absence of testing.

To make the first point, the American Geophysical Union and the Seismological Society of America issued a joint statement on 6 October declaring that the treaty's proposed monitoring system "can be relied upon" to detect cheating.

Interpretation of data

But by the time the statement was issued, the argument was already lost. On Sunday 3 October, the lead story in the *Washington Post* announced that "the Central Intelligence Agency [CIA] has concluded that it cannot monitor low-level nuclear tests by Russia precisely enough to ensure compliance" with the treaty.

The story contained no attributable quotes, and no response from US seismologists, who have been arguing with CIA analysts for years about the interpretation of seismic data from the Novaya Zemlya test site in northern Russia.

The CIA repeated this assessment in closed briefings of senators on Tuesday 5 October. Although friends of the treaty say that no fresh information was revealed, its enemies cited their classified content — which, of course, they could not divulge — as proof that the treaty was unverifiable.

As for the effectiveness of stockpile



Testing time: the treaty would ban nuclear tests like this 1995 French one at Fangatau Atoll.

stewardship, much technical advice also favoured ratification. Thirty-two US Nobel prizewinners in physics signed a letter to the Senate, stating that "fully informed technical studies have concluded that continued nuclear testing is not required to retain confidence in the safety, reliability and performance" of US nuclear weapons.

But none of the Nobelists testified before the Senate. The experts who did were the directors of the three nuclear weapons laboratories: Los Alamos and Sandia in New Mexico and Lawrence Livermore. Their testimony before the Armed Services Committee on 7 October was finely balanced on the question of stockpile stewardship, although John Warner (Republican, Virginia), who chairs the committee, believes it cast doubt on the programme's effectiveness.

"On balance, we remain positive about the prospects for success," said Bruce Tarter, director of Livermore, whose testimony was perhaps the most favourably disposed towards stockpile stewardship. "With sustained support, it is an excellent bet but it ain't a sure thing."

Paul Robinson, the director of Sandia, came closest to repudiating the programme's ability to maintain the weapons stockpile indefinitely. "The difficulty we face is that we cannot guarantee that science-based stockpile stewardship will be ultimately successful; nor can we guarantee that it will be possible to prove that it is successful."

The three directors had a tough day on 7 October. It was time to choose between pleasing their boss, energy secretary Bill Richardson, or their paymaster, the Republican majority in Congress.

But treaty supporters believe that the director's testimony hurt its already fading prospects. "The lab directors' testimony was

misdirected," says Spurgeon Keeney, president of the Arms Control Association. "They behaved badly, and used the hearing as an opportunity to plead for their budgets."

Daryl Kimball, head of the coalition lobbying for the treaty in Washington, said: "They tried to engage in a game of budgetary extortion, by insisting that they weren't 100 per cent confident in stockpile stewardship."

It was left to Sid Drell of the Stanford Linear Accelerator Center in California, one of the architects of the stewardship programme, to defend it before the Armed Services Committee. "The coin of the realm in science is not opinion, but data," he said. "Any scientist welcomes more data. The question is what data are necessary." Nuclear explosions, he testified, would contribute "nothing essential" to the maintenance of the nuclear stockpile.

However, like most of the technical witnesses, Drell was speaking to an empty room at the end of a long day. Only Warner and Carl Levin (Democrat, Michigan) were there to hear him — and both were having whispered conversations with aides.

Party politics

The whereabouts and motivations of the phantom Republican moderates are difficult to pin down. Warner, whose early declaration against the treaty virtually ended its prospects of ratification by the necessary two-thirds majority, seemed preoccupied with his concern that "unsafe" nuclear weapons might blow up in the hands of "young servicemen and women".

Richard Lugar (Republican, Indiana), the moderate Republican whose support the treaty most badly needed, kept a low profile, refusing to meet with scientists or talk to the press and issuing a comprehensive rebuttal of the treaty on 8 October.

Pete Domenici (Republican, New Mexico) wanted the vote deferred, and came close to saying the treaty should be ratified with some adjustments, before voting against it.

In the end, partisan politics seems to have triumphed over technical debate. After the treaty fell, by 51 votes to 48, Clinton emerged energized, doing what he does best — attacking the Republicans. Vice-president Al Gore was also on television, with the first commercial of his 2000 presidential campaign, in support of the treaty.

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