

Renew the Drive for CTBT Ratification

As the historic first 100 days of President Barack Obama's administration fly by, he faces a tsunami of advice on the key priorities he should pursue over the next four years. Ranging from energy independence and national health care reform to improving America's image with the Islamic world and revamping our foreign assistance structure, the president must decide where to focus his scarce time, resources, and political capital. One initiative he should strongly consider this year is calling upon the U.S. Senate to once again take up the ratification of the Comprehensive Test Ban Treaty (CTBT) to outlaw nuclear testing around the world, even though the initiative failed in October 1999 by a 51–48 vote.

Obama has assumed office at a time when the nuclear nonproliferation regime is seriously tattered. Iran is making significant progress on an ostensibly civilian uranium enrichment program that can be quickly converted into a weapons program. North Korea has quadrupled the size of its fissile material stockpile since 2002 and joined the nuclear club in 2006 with a nuclear weapons test. The Nuclear Non-Proliferation Treaty (NPT), the lynchpin of global efforts to halt the spread of nuclear weapons, is under heavy strain. Revitalizing the nonproliferation regime, and reducing the odds that a terrorist group can seize a nuclear weapon for use in a terrorist attack, must be at the top of any president's to-do list.

During his presidential campaign, Obama often spoke of changing the U.S. approach to national security challenges by not being aggressively unilateral or overly reliant on the use of military force as the first option, calling upon the United States “to rebuild and construct the alliances and partnerships necessary to meet common challenges and confront common threats.”¹ He described

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Copyright © 2009 Center for Strategic and International Studies
The Washington Quarterly • 32:2 pp. 79–90
DOI: 10.1080/01636600902772760

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the prospect of a terrorist group detonating a nuclear weapon in a U.S. city as “the gravest danger we face.”² For that reason, following in the footsteps of such statesmen like Sam Nunn and Henry Kissinger, Obama explicitly endorsed the vision of a world free of nuclear weapons, achieved in a comprehensive and verifiable manner.³ A concrete means to that goal, as well as the opportunity to repair the image of the United States around the world, is for Obama to call upon the Senate this year to make another effort to ratify the CTBT by the end of his first term in office.

The 1999 vote fell short of an absolute majority, much less the two-thirds majority required for treaty ratification under the U.S. Constitution. This failure undercut traditional U.S. leadership on nuclear nonproliferation issues, and offered an easy justification for China to continue to refuse to ratify the CTBT, as well as for India and Pakistan to avoid signing the treaty altogether. An announcement in Obama's first year in office that he will call on the Senate to initiate the consideration of the CTBT by holding the appropriate hearings over the next year, with the goal of scheduling a ratification vote prior to the end of his first term in 2012, will send an unmistakable signal that the United States is once again committed to multilateral, rules-based cooperation with the international community to advance mutual interests. It will reenergize a flagging nonproliferation regime and offer the United States important leverage on key challenges like Iran and North Korea. With a healthy majority of Democratic senators in place, and close relationships with key moderate Republicans, Obama is within reach of the 67 votes necessary to secure ratification, and accomplish a significant foreign policy and national security goal.

Why Push for CTBT Ratification Now?

The Obama administration cannot take the decision to press the Senate for CTBT ratification before 2012 lightly. It will require a significant investment of political capital by the president and his senior national security team during his first term in office to closely coordinate with the Senate leadership and chairmen of the Foreign Relations, Armed Services, and Intelligence Committees. The risks of failure are considerable: a second rejection by the Senate would likely doom the nuclear test ban treaty to oblivion and risk encouraging other states to end their informal moratoria on nuclear testing. So why should Obama forge ahead with a determined campaign for CTBT ratification?

A New Approach to International Engagement

First, a pledge to work toward CTBT ratification would help demonstrate the administration's commitment to multilateral cooperation. The election of Obama as the United States' forty-fourth president ignited celebrations around the world in part because it was expected to end the era of U.S. unilateralism and "cowboy diplomacy." To his credit, Bush pursued a largely diplomatic course during his second term, especially toward the nonproliferation challenges posed by Iran and North Korea, but it was too late to repair the image of U.S. unilateralism. Obama offers the United States a fresh start on redefining its international image. Even though the international community is extending a friendly hand toward Obama and his team, the new administration may well find that budgetary constraints or differing conceptions of shared interests will limit other avenues of multilateral cooperation on issues like global warming or a renewed focus on Afghanistan. It is for that reason that a concrete pledge to work with the Senate on CTBT ratification carries so much promise.

Senate ratification of the CTBT matters because it would be hailed as a renewed U.S. commitment to the essential pact at the heart of the NPT. Much of the international community, especially leading nonnuclear weapons states like Brazil, Japan, South Africa, and Sweden, believe that the United States has backtracked on the NPT's basic bargain contained in Article VI: in exchange for the pledge by nonnuclear weapons states to not acquire nuclear weapons, the United States and the four other recognized nuclear weapons powers—China, France, Russia, and the United Kingdom—would pursue measures "in good faith" to cease the nuclear arms race and achieve eventual nuclear disarmament. Under the Clinton administration, the United States explicitly reaffirmed its commitment to eventual nuclear disarmament at the 1995 NPT Review Conference in exchange for the agreement of other States Parties to indefinitely extend the NPT. Without this compromise, the NPT could have been allowed to expire or, more likely, extended only for a fixed period. The 2000 NPT Review Conference followed up with the adoption by all States Parties of a thirteen-step plan to pave the path for eventual general nuclear disarmament, with the first step calling for the CTBT's early entry into force.⁴

In the years following the 2000 conference, however, the United States was viewed as diverging from, and in some cases repudiating, many of those agreed upon measures. Bush exercised the right of the United States to withdraw from the 1972 ABM Treaty, viewed by many nations as a pillar of strategic stability. The administration's 2002 Nuclear Posture Review explicitly discussed the circumstances under which a first use of nuclear weapons could be contemplated, and referred to possible target nations.⁵ Administration officials discussed renewed efforts on research and development of new nuclear weapons, including so-called bunker buster bombs and miniaturized nuclear warheads, that

could lend themselves to more accessible use in a conflict. Finally, the administration withheld some key funding from the Comprehensive Test Ban Treaty Organization (CTBTO), the international secretariat responsible for all relevant preparations for the CTBT's entry into force, and sought congressional approval to shorten the timeline for required preparations before a nuclear weapons test.

In light of this recent discouraging history, an unmistakable commitment from Obama that he will seek Senate ratification of the CTBT during his first term in office may do more than any other single measure to indicate to the world that the United States is not only listening to, but also respects, the views of the international community. While it will do little to directly convince rogue states like Iran or North Korea to halt their nuclear weapons programs, it will strengthen the hand of the United States as it seeks to build international coalitions to squeeze those hostile states. Indeed, a recent survey of sixteen key nonnuclear weapons states reached the conclusion that ratification of the CTBT "would send a very strong signal" to demonstrate the U.S. commitment to disarmament.⁶

The commitment will also position the United States particularly well for the NPT Review Conference scheduled for 2010. These review conferences, held every five years, offer an opportunity for NPT signatories to gather and assess the overall health of the nuclear nonproliferation regime. In the 2000 conference, the United States agreed to seek early entry into force of the CTBT and committed to twelve other specific steps to promote nonproliferation and disarmament. Upon taking office the next year, the Bush administration swiftly renounced these commitments, setting the stage for a 2005 conference viewed by all parties involved as an unmitigated disaster. A concrete pledge by the United States to seek CTBT ratification will therefore energize the 2010 conference, and offer Washington greater leverage to push through potential reforms it may seek regarding the export of reprocessing and enrichment technology or automatic sanctions against states that violate their IAEA obligations.

Toward a Nuclear-Free Reality

Second, CTBT ratification represents a down payment on the Obama pledge to work toward a nuclear-free world. The movement to ultimately rid the world of the most destructive weapons ever known to man has taken on renewed vigor in recent years. A landmark op-ed published in January 2007 by the so-called "Four Horsemen"—Henry Kissinger, Sam Nunn, William Perry, and George Schultz—set forth a bold vision of a renewed commitment to a world free of nuclear weapons, achieved in a comprehensive and verifiable manner.⁷ This bipartisan endorsement by such respected figures provided the political space for this issue to enter the presidential campaign. During the presidential campaign, both Obama and his rival, Senator John McCain, issued explicit statements

supporting the vision of a world free of nuclear weapons.⁸ After securing the nomination, Obama reaffirmed that pledge in a national security speech in July at Purdue University:

It's time to send a clear message to the world: America seeks a world with no nuclear weapons. As long as nuclear weapons exist, we'll retain a strong deterrent. But we'll make the goal of eliminating all nuclear weapons a central element in our nuclear policy. We'll negotiate with Russia to achieve deep reductions in both our nuclear arsenals and we'll work with other nuclear powers to reduce global stockpiles dramatically. We'll seek a verifiable global ban on the production of fissile material for weapons. And we'll work with the Senate to ratify the Comprehensive Test Ban Treaty and then seek its earliest possible entry into force.⁹

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As Obama himself recognizes, the road to a world free of nuclear weapons must include the entry into force of the nuclear test ban treaty. A global ban on nuclear weapons tests is an essential step to halting the entry of new states into the nuclear club: without the ability to demonstrate its mastery of nuclear weapons by detonating one, no proliferator can lay claim to a credible nuclear arsenal. Likewise, a test ban promises to halt destabilizing nuclear arms races between existing weapons states by ceasing the development and deployment of new types of nuclear weapons. Without the option of tests to verify their effectiveness and reliability, a nuclear power will be hard pressed to introduce new advanced weapons into their deterrent. Instead, an effective nuclear test ban will more or less freeze existing nuclear arsenals at their current levels and prevent future improvements to their explosive power or miniaturization of warheads for missile deployment. For that reason alone, the United States, which possesses the most advanced nuclear arsenal in the world, should be a strong supporter of a treaty that promises to lock in the nuclear weapons status quo. Furthermore, the CTBT entry into force would prevent China from further advances in fielding multiple warhead ballistic missiles.¹⁰

It is no accident that the very first measure in the thirteen-step action plan adopted by the 2000 NPT Review Conference referenced the need for early entry into force of the CTBT. A nuclear free world cannot come into existence unless the international community first agrees to end the nuclear arms race and prohibit any further advances to existing nuclear arsenals. Obama, therefore, can best demonstrate the genuineness of his pledge to work toward a nuclear-free world by working toward CTBT ratification during his first term in office.

A pledge would help demonstrate commitment to multilateral cooperation.

Improved Political Prospects for Ratification

And finally, the political prospects for CTBT ratification have drastically improved. In 1999, a president who favored CTBT ratification confronted a Senate controlled by the opposition party, many of whose members mistrusted the administration's positions on national security issues and questioned the commander in chief's fitness for office, particularly in the wake of impeachment proceedings. For the past eight

years, while the Senate has at times been controlled by the Democrats, it has always worked with an administration opposed to CTBT ratification. For the first time since former president Bill Clinton signed the CTBT in 1996, 2009 marks a significant departure: the United States has a president and a significant Senate majority that can be expected to strongly favor ratification.

It is instructive to look back at the 1999 Senate vote rejecting CTBT ratification. Every Senate Democrat voted in favor of the CTBT, with the exception of Senator Robert Byrd, who voted "present" only to register his procedural anger that such an important treaty was voted upon following a mere three days of debate on the Senate floor. Four moderate Republicans broke from their party to vote in favor of CTBT ratification. Of those four, only Senator Arlen Specter remains in the Senate today. The circumstances leading up to the Senate's rejection of the CTBT have been exhaustively detailed elsewhere.¹¹ Nonetheless, any fair analysis of the opposition of Senate Republicans to the CTBT will acknowledge the role played by raw politics. Put simply, Senate Republicans were angry at Clinton, in part for his success in evading an impeachment conviction earlier in 1999 stemming from the Monica Lewinsky scandal. That anger poisoned relations between the administration and congressional Republican leadership. Some Republicans refused to accept Clinton as a legitimate commander in chief, owing to his decision to sit out the Vietnam War and actions early in his presidency relating to gays in the military and the peacekeeping mission in Somalia.

The CTBT rejection by the Senate was the first rejection of a major international treaty since the League of Nations accord following World War I. Any serious campaign for a renewed bid for Senate ratification must address such key issues as verifiability and whether the United States can maintain a reliable and credible nuclear arsenal in the absence of future tests. A Senate debate on CTBT ratification under an Obama presidency will be focused exclusively on these issues, with domestic politics and personal animosities largely out of the picture.

Not only do Democrats control both the presidency and the Senate today, but a number of influential Republicans have expressed a willingness to take another look at the nuclear test ban treaty. GOP presidential nominee McCain, who easily could have remained silent on the issue during the 2008 campaign, instead went out of his way to raise it in the context of a major speech on U.S. nonproliferation strategy:

As president, I will pledge to continue America's current moratorium on testing, but also begin a dialogue with our allies, and with the U.S. Senate, to identify ways we can move forward to limit testing in a verifiable manner that does not undermine the security or viability of our nuclear deterrent. This would include taking another look at the Comprehensive Test Ban Treaty to see what can be done to overcome the shortcomings that prevented it from entering into force.¹²

In response to a question following a speech at the Carnegie Endowment for International Peace in October 2008, Secretary of Defense Robert Gates also expressed his support for CTBT ratification so long as adequate verification measures are in place.¹³

The political circumstances for CTBT ratification, therefore, are ripe: a Democrat, with the first clear majority of the U.S. popular vote since Jimmy Carter in 1976, occupies the White House, while Senate Democrats enjoy a 59-seat majority, the largest margin of power since 1980. Obama's national security team should keep in mind that the international community will not wait indefinitely for the United States to move on CTBT ratification. Should another five years come and pass without any U.S. movement, a nation like China may choose to end its nuclear testing moratorium. A test by any nation could trigger a domino effect, leading to the quick collapse of the decade-old informal moratorium of the P-5 weapons states on nuclear testing.

The time to move is now.

A Roadmap for Securing Senate Ratification

What are the likely prospects if the Senate was to hold another vote on CTBT ratification during the Obama administration? We can start from the proposition that all 59 Senate Democrats will vote to ratify the CTBT because 1) they believe in the merits of a global nuclear test ban, and 2) they will want to support their president.¹⁴ As a result, nine Republican yes votes would be needed to ensure the 67 votes necessary to secure ratification under the constitution.

The key player on the Republican side will be the ranking member on the Senate Foreign Relations Committee, Senator Richard B. Lugar (R-IN). In 1999, he voted against CTBT ratification. Given the close relationship, however, that he has forged with both Obama and Vice President Joe Biden and the strong legacy he has sought to build on internationalist leadership on

CTBT ratification represents a down payment to work toward a nuclear-free world.

U.S. foreign policy, Lugar can be expected to give a fair hearing to administration arguments in favor of CTBT ratification. Should he choose to reverse his previous vote on CTBT ratification, he may provide political cover to bring along other Republican votes to secure ratification.

Opposition to the CTBT will be led by Minority Whip Jon Kyl (R-AZ), a hardliner on arms control and national security issues who closely coordinates with key conservatives such as John Bolton and James Schlesinger. Kyl's goal

will be to hold 34 of the Republican Senators together against the CTBT. The key to success, therefore, lies in pitching CTBT ratification as a serious national security debate to avoid it becoming a victim of partisan politics. Particular focus should be placed on those Republican Senators who will be exposed to this debate for the first time: eighteen Republican Senators in the current Congress were not members in 1999 and thus will evaluate the merits of CTBT ratification with a fresh perspective.

If Obama concludes that a major push on ratification of the CTBT is a wise use of his political capital during his first term in office, he needs to prepare the ground for 67 yes votes in the Senate, including some Republican crossover votes. By the end of this year, Obama should deliver a major address on his nuclear nonproliferation agenda as president. He should expound on the vision he articulated as a candidate of a world free of nuclear weapons and how the United States can work with others in moving toward that objective. He should also outline the direction, if not final results, of his administration's internal deliberations on the U.S. Nuclear Posture Review, required to be completed by early next year, and make any resulting announcement on measures to take U.S. nuclear weapons off high-alert status and implement strategic force reductions, possibly in conjunction with the Russian Federation. Finally, he ought to call upon the Senate to initiate legislative proceedings to take up the CTBT with the aim of scheduling a floor vote by the end of his first term in office. To start that process, Obama must call upon the relevant Senate Committees (e.g., Foreign Relations, Armed Services, and Intelligence) to launch a comprehensive series of hearings on the CTBT and the implications of ratification for U.S. national security interests.

A key reason for the CTBT's rejection in 1999 was the cursory review it received in the weeks leading up to the vote. Senate Republicans, led by Majority Leader Trent Lott (R-MS) and Foreign Relations Chairman Jesse Helms (R-NC), effectively blocked the CTBT for two years after it was submitted by Clinton in 1997. Coming under increased pressure from some

Democratic Senators and outside groups to schedule a vote, the Senate Republican leadership effectively called their bluff and scheduled a final vote with only twelve days notice, allowing only for three Armed Services hearings, one Foreign Relations hearing, and fourteen hours of floor debate. A similar scenario cannot unfold again this time. Any Senate vote on the CTBT must be preceded by extensive hearings that assess every potential concern regarding U.S. ratification.

In particular, the hearings should take time to address the following key concerns. First, the degree to which the expertise derived, and lessons learned, from more than a decade of practical experience under the Stockpile Stewardship Program has bolstered confidence in maintaining the reliability and safety of the U.S. nuclear weapons arsenal without nuclear testing. The Stockpile Stewardship Program, established in 1995 and administered by the Department of Energy, refers to research, simulation, and other activities to ensure a continued reliable, safe, and credible U.S. nuclear deterrent in the absence of nuclear testing. At the time of the 1999 Senate vote on CTBT ratification, this initiative was still too new to provide conclusive results on its performance. Members should closely assess the successive annual certifications of the U.S. stockpile and whether such certifications will be imperiled in future years due to aging of nuclear weapons components and material.

Second, the hearings should take into account the numerous advances in recent years that have taken place in relevant verification and monitoring technology which has bolstered the ability of State Parties of the CTBT to detect illicit nuclear tests, including sub-kiloton explosions. An assessment of the performance of the International Monitoring System, the global network of monitoring stations that has been developed to detect nuclear tests around the world, should be given special attention, especially since it was able to detect the small North Korean nuclear test in 2006.

And finally, the hearings should analyze whether the United States will need to develop new warheads, such as the Reliable Replacement Warhead proposed by the Bush administration, for the U.S. nuclear arsenal, either to incorporate new safety features or provide added capabilities.

Ideally, these hearings would serve to document a clear and overwhelming record of support for the CTBT from leading national security figures of both parties while simultaneously airing the concerns of those with reservations. By taking place over a twelve-month period, these hearings can methodically build the case for CTBT ratification while raising public consciousness on the benefits of the CTBT and fairly addressing concerns about the treaty. The hearings can help demonstrate broad backing from both weapons experts and physicists who help maintain U.S. nuclear weapons as well as senior military leaders who ultimately must trust in the reliability and credibility of the U.S. nuclear arsenal.

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Most importantly, the hearings can help flush out the key conditions, understandings, and safeguards that would need to be attached to any resolution of ratification capable of earning 67 yes votes.

The circumstances surrounding the 1999 vote also highlight the crucial role to be played by the directors of the three national nuclear weapons laboratories in the United States: Los Alamos, Lawrence Livermore, and Sandia. While all three

lab directors testified in 1999 in support of the CTBT, some were less enthusiastic than others. The directors were cautious in conveying their assessment that the United States could maintain a safe and reliable nuclear stockpile before the Stockpile Stewardship Program was able to prove itself. The director of Sandia raised the possibility during his congressional testimony that a signatory could test a nuclear explosion in the sub-kiloton range and escape detection. At a minimum, the Obama administration should develop a clear understanding of what the lab directors believe would be the effect on the safety and reliability of the U.S. nuclear arsenal in the absence of testing, and be prepared to address any potential concerns the lab directors raise. A Senate ratification process is not the time for surprises or misunderstandings when it comes to such key witnesses.

Some have argued strongly for the creation of a special coordinator or presidential envoy for CTBT ratification in order to focus the resources of the executive branch. There is some precedent for such an appointment: Gen. John Shalikashvili, former chairman of the Joint Chiefs of Staff, served as a special advisor to Clinton during his final year in office to lay the groundwork for Senate reconsideration of the CTBT. Nonetheless, the value of a formal CTBT special envoy/coordinator position may be overrated. Any real push for CTBT ratification must involve the investment of personal time and effort by the secretaries of state, defense, energy, and the national security advisor.

Calling upon Biden to personally lead the outreach and lobbying effort with the Senate is another useful option available to the Obama administration. Biden can draw upon his deep expertise on arms control, his previous experience with the 1999 ratification effort as the then-ranking member on the Senate Foreign Relations Committee, and his close ties to many senior Senate Republicans, including Lugar. Biden has long been a forceful advocate for the CTBT, and can burnish his legacy by serving as the administration's point person in getting the treaty through the Senate the second time around.

The president can also take a number of immediate steps, preceding any Senate ratification vote, to demonstrate his positive intentions to the international community. First, Obama can restore full funding of U.S. dues owed to the CTBTO. The Bush administration only fulfilled the portion of U.S. dues related to construction of the International Monitoring System because the administration concluded that such a capability benefited the United States even in the absence of CTBT ratification. It refused to pay that portion of U.S. dues to support the executive secretariat functions of the CTBTO or to make preparations for an on-site inspections regime, on the grounds that such functions are irrelevant if the United States does not support the CTBT. The Obama administration can reverse that decision by paying off these accumulated arrears, now totaling over \$40 million, and win immediate plaudits from allies and partners. Second, when the UN next takes up a general resolution of support for the CTBT, the U.S. representative can join the overwhelming majority of UN member states in voting for it. That would be in sharp contrast to the most recent vote, taken in September 2008, where 168 countries voted in favor, three countries (India, Mauritius, and Syria) abstained, and one country cast a no vote: the United States.

The Time to Act is Now

Obama won the presidency in part on his pledge to bring a new tone to U.S. relations with the world through enhanced multilateral cooperation and a pragmatic approach to international institutions and treaties. Substantively, Obama has identified the specter of nuclear terrorism as the gravest challenge to our national security and linked that threat to the breakdown of the nuclear nonproliferation regime. Accordingly, he concluded that only a renewed effort, led by the United States, toward a world of zero nuclear weapons can make real headway in reducing the threat of proliferation and nuclear terrorism.

Senate ratification of the CTBT and its resulting entry into force would set a new tone for U.S. diplomacy while revitalizing the nuclear nonproliferation regime. It would restore U.S. credibility on this issue after years of moving in the opposite direction. Obama enjoys a broad mandate and the strong support of almost 60 Senate Democrats. Now is the time for a renewed push for CTBT ratification that can serve as a landmark national security accomplishment for the United States and for international peace and stability.

Notes

1. "Remarks of Senator Barack Obama to the Chicago Council on Global Affairs," April 23, 2007, <http://my.barackobama.com/page/content/fpccga/>.
2. "Remarks of Senator Barack Obama, Summit on Confronting New Threats," Purdue University, Indiana, July 16, 2008, <http://my.barackobama.com/page/community/post/amandascott/gGxPZW> (hereinafter Obama's New Threat Remarks).
3. Obama's New Threat Remarks; "A World Free of Nuclear Weapons," *The Wall Street Journal*, January 4, 2007, p. A15.
4. "2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons Final Document," pp. 14–15, <http://www.un.org/spanish/Depts/dda/2000FD.pdf>.
5. Michael Gordon, "U.S. Nuclear Plan Sees New Targets and New Weapons," *New York Times*, March 10, 2002, <http://query.nytimes.com/gst/fullpage.html?res=9907E0D61F30F933A25750C0A9649C8B63>.
6. Deepti Choubey, *Are New Nuclear Bargains Attainable?* (Washington D.C.: Carnegie Endowment for International Peace, October 2008), http://www.carnegieendowment.org/files/new_nuclear_bargains.pdf.
7. George Schultz, William Perry, Henry Kissinger, and Sam Nunn, "A World Free of Nuclear Weapons," *The Wall Street Journal*, January 4, 2007, p. A15.
8. Andrew Stern, "Obama Would Seek Nuclear Ban," *Boston Globe*, October 3, 2007, http://www.boston.com/news/nation/articles/2007/10/03/obama_would_seek_nuclear_ban/; "Remarks by John McCain on Nuclear Security," University of Denver, Colorado, May 27, 2008 (hereinafter McCain Remarks).
9. Obama's New Threat Remarks.
10. For further information, see "Technical Issues Related to the Comprehensive Nuclear Test Ban Treaty" (Washington D.C.: National Academies Press, 2000), chapter 3.
11. Daryl Kimball, "How the U.S. Senate Rejected CTBT Ratification," *Disarmament Diplomacy*, no. 40 (September–October 1999), <http://www.acronym.org.uk/40wrong.htm>.
12. McCain Remarks.
13. "Gates: Nuclear Weapons and Deterrence in the 21st Century" (speech, Carnegie Endowment for Peace, Washington D.C., October 28, 2008), http://www.carnegieendowment.org/files/1028_transcrip_gates_checked.pdf.
14. Joe Lieberman voted in favor of the CTBT ratification in 1999 and has shown no signs that he regrets that vote.