

The Comprehensive Nuclear-Test Ban Treaty and Recommendations for U.S. Ratification

Shikha Prasad

*Department of Nuclear Eng. and Radiological Sc., University of Michigan, 2355 Bonisteel Blvd, Ann Arbor, MI 48105
shikhap@umich.edu*

INTRODUCTION

The Comprehensive Nuclear-Test-Ban Treaty (CTBT) was adopted by the United Nations General Assembly on 10th September 1996. It bans all nuclear testing in all environments [1]. The CTBT was signed by the U.S but the Congress rejected its ratification in 1999. The Congressional debate in 1999 asked many tough questions about the treaty which lacked major details at the time. The three main questions asked by the Congress leaders were: if the U.S could maintain its nuclear deterrent with reliability without any nuclear testing, if the monitoring technology was developed enough to prevent cheating by other states and if other nations would follow suit after U.S ratification of the CTBT [2]. Presently, the U.S. and eight other states need to ratify the treaty for it to enter into force; however, the U.S. has been observing a voluntary nuclear test moratorium since 1992. After being elected to the office President Obama had expressed his willingness to reconsider the CTBT ratification in the light of new evidences and programs [3].

CTBT AND THE LIFE EXTENSION PROGRAM

Over the past 15 years, the National Nuclear Security Administration (NNSA) has successfully proven that there are alternative ways to maintain the existing nuclear stockpile in the absence of nuclear testing. Through programs such as the Life Extension Program (LEP) the NNSA has worked with national lab scientists and engineers to increase the lives of existing weapons. The LEP has helped curb the technical problems associated with the present nuclear stockpiles, which started arising in the 1980s and were primarily caused due to ageing of nonnuclear components [4]. Due to the success of the LEP in maintaining the present stockpiles with high confidence and its goal to increase the weapons' lifetimes by 20-40 years, it can be relied upon for maintaining existing stockpiles without any need for nuclear testing.

FUTURE RECOMMENDATIONS

Beyond a100 years: Replacing the "Pit"

The life of a nuclear weapon (whose nonnuclear components are maintained and replaced as desired through the LEP) is primarily limited due to its nuclear component or its "pit". The pit of a nuclear weapon is the

component designed to create a nuclear explosion and has a lifetime of approximately a hundred years [5]. In a report released to the Congress by Jonathan Medalia, it has been pointed out that U.S. has been unsuccessful in producing stockpile quality pit since 1989 [5]. This has been an issue of great concern to Congress which has failed to take robust steps to address this issue in a timely manner.

In order to maintain the reliability of nuclear stockpiles after the CTBT ratification and beyond the lifetime of the nuclear pits it is essential to establish focused programs that will work solely on the objective of pit remanufacturing. It will be beneficial to work on the old designs of pits and to remanufacture them. This strategy would be a balance: on the one hand, it can increase the length of the present stockpile beyond a hundred years; while on the other hand, it is only replacing existing nuclear pits with newer pits of the same old design.

Involvement of the People

It has been widely argued that the U.S. nuclear strategy has not been well articulated after the September-11 attacks and has, therefore, not been well understood by the Congressmen [6]. If the leaders in charge of making national policies are not well educated regarding the policies, the resulting policies fail to serve the country. Furthermore, since the leaders are ill-informed, they can also mislead their constituents by creating a myriad of false beliefs and opinions. Thus, it is recommended to take immediate steps to educate Congressmen regarding the precise technical issues, their policy related consequences and the strategies that result from these conclusions.

It is a myth that all information related to nuclear weapons is confidential. If there is non-confidential information regarding nuclear stockpiles which can be instrumental to people in making sense of nuclear weapons policy, it will be beneficial to systematically present this information to them. This will enable the people to reach their political leaders with pertinent and educated concerns regarding their security. Education of the public can be used as a great strategy by the Congressmen in the CTBT ratification debates, since in addition to scientific reports and military leader advices, they will (perhaps for the first time) also have opinions

from their constituents: an essential element of a democratic society.

CONCLUSION

CTBT ratification will need a 2/3rd vote from Congress. Thus, the strategies guiding the CTBT ratification need to carefully balance the values of different stakeholders and appease most leaders and their concerns. The two most critical values that need to be balanced are national security and scientific credibility. While it is true, as pointed by the CTBT proponents, that nuclear testing is not required to maintain the nuclear deterrent, it should be ensured that this argument can be made even beyond the lives of the existing weapons maintenance programs. This will help allay the fears of those concerned about national security due to a reduced nuclear deterrent in the long run.

It is also recommended to realize the context of weapons reduction treaties such as the new START III treaty when discussing CTBT. The U.S. has been slowly but surely reducing its stockpile since the end of the Cold War [7]. Thus, the conservative political leaders should be convinced that CTBT will not reduce the nuclear stockpiles, but START III will. America should get more accustomed to a lesser role of nuclear weapons as it moves forward with treaties such as CTBT and START III to set new trends and convince the world that there may be chance to see a world without nuclear weapons. A world free of nuclear weapons is necessary to eliminate the risk of a nuclear attack such as those by terrorists. Being the first and the only country to have ever used nuclear weapons, it becomes America's "moral responsibility to act" [8].

REFERENCES

1. *Resolution Adopted by the General Assembly: Comprehensive Nuclear-Test-Ban Treaty*, Original English 17 September 1996, United Nations, A/RES/50/245, <http://www.un.org/documents/ga/res/50/ares50-245.htm>
2. J. MEDALIA, "Comprehensive Nuclear-Test-Ban Treaty: Issues and Arguments" RL34394 (2008).
3. "Arms Control Today 2008 Presidential Q&A: President-elect Barack Obama", <http://www.armscontrol.org/2008election>
4. Statement of Thomas P. D'Agostino Acting Under Secretary for Nuclear Security and Administrator National Nuclear Security Administration U.S. Department of Energy before the Committee on House Armed Services Subcommittee on Strategic Forces, March 20, 2007
5. J. MEDALIA, "Nuclear Warhead "Pit" Production: Background and Issues for Congress" CRS Report for Congress, RL31993, March 29th, 2004
6. "Nuclear Weapons in 21st Century U.S. National Security", AAA, APS, CSIS Report, December 2008
7. "DOE Stockpile Stewardship and Management Plan" Union of Concerned Scientists, July 2010
8. "Barack Obama's Full Prague Speech", <http://news.bbc.co.uk/2/hi/americas/7984353.stm>