CHAPTER 7

Verification Challenges on the Road to NSNW Arms Control

Philip Foley[1]

The preceding chapters have discussed in some detail the international environment surrounding the problems and opportunities involving non-strategic nuclear weapons (NSNW). They have outlined certain goals and objectives and presented potential frameworks for agreement.

This chapter reviews multiple obstacles and challenges to effectively dealing with the problem of NSNW arms control. Specifically, could those obstacles be overcome and managed? And if so, how?

The chapter focuses on one significant aspect of this problem: verification. The ability to effectively verify any legally binding agreement dealing with this category of nuclear arms will determine to a great extent whether such an agreement would be beneficial to the United States.

The author is not advocating an arms control solution, but does believe that effective verification must be integral to any legally-binding solution to the problem. Moreover, the United States should consider whether verification should be included as part of any agreement or commitment on NSNW.

Perhaps it is better to state the challenge in this way: Could an arms control agreement on NSNW be effectively verified at all?

Some Basic Decisions Should Precede Negotiations

Before we engage in any serious negotiations on NSNW arms control, we need to decide upon the scope of the talks. Should they be bilateral or multilateral, and if the latter, which states should participate?

An obvious choice is to elect the bilateral route and begin with Russia, perhaps in association with the START process (since as overall numbers are reduced, the remaining arsenals of uncontrolled NSNW become more significant). A case could be made for including other nuclear powers and perhaps even India and Pakistan; however, the likelihood of their participation, at least initially, is not good.

One of the foremost decisions to be made is whether the objective of such negotiations should be limits or elimination. In this process consideration must be given to the incentives for so-called "states of concern" to build up their NSNW capabilities at the same time the United States and other participants are limiting or eliminating theirs.[2] Other potential participants will make similar determinations. Russian views will be of particular weight given their recent pronouncements on the utility of nuclear weapons, particularly tactical weapons, for their defensive needs.

I believe it is fair to assume that any negotiation on NSNW must include as a minimum the United States and Russia.

What Should be Limited or Eliminated?

One of the most significant policy issues that must be resolved in an agreement on NSNW is defining the class of weaponry that will be subject to its provisions.

To use the Intermediate-Range Nuclear Forces (INF) treaty as an example, the United States and Soviet Union agreed it was in their mutual interest to eliminate an entire class of weapons. These included ground launched ballistic missiles and ground launched cruise missiles with ranges between 500 and 5,500 kilometers. The two parties also agreed to construct an on-site inspection regime to verify their elimination. Because of the continuing production of the SS-25, which utilized a stage very similar to one used in the banned SS-20, the two sides also agreed to production monitoring. While the front sections of the missiles, including reentry vehicles and instrumentation

compartments, were eliminated, the nuclear warhead devices and guidance elements were not controlled.

In the Strategic Arms Reduction Treaties (START), the United States and Soviet Union agreed to limit deployed strategic delivery vehicles and warheads attributed to them to 1600 of the former and 6000 of the latter following a phased draw-down period of seven years. Note here that actual warheads are not directly controlled under START. START contains an intrusive inspection regime modeled on the INF Treaty, including inspections of reentry vehicles to verify attributed warhead numbers for intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles (SLBMs) and inspections of weapons storage areas for non-ALCM (air-launched cruise missile) heavy bombers to verify the absence of nuclear ALCMs.

The START II Treaty continued the process begun under START I. It established lower limits and used the START I verification regime, augmented to fit certain new provisions of START II. However, the fate of START II is uncertain and is likely to remain so until the Bush administration has had the opportunity to review and establish an arms control policy and plan.

Likewise, the current approach to the pending START III negotiations would essentially follow a similar path to lower limits. But there are other obstacles, namely national missile defense and the future of the Anti-Ballistic Missile (ABM) Treaty, standing in the way of serious negotiations.

Two significant lessons stand out from America's INF and START experiences:

- Treaty limited items have been delivery vehicles and their support equipment.
- Each contained a verification regime that depended upon interrelated measures involving national technical means of verification, declarations of items subject to the treaties, annual data exchanges, on-site inspections, limited suspect-

site inspections, limited production monitoring, geographic restrictions, and notifications.

Each of these is essential to effective verification, but none by itself is foolproof.

How Do We Attack the Verification Problem for NSNW?

A persuasive case can be made for starting slowly and building on initially modest foundations rather than attempting a more comprehensive global approach to NSNW verification.

The existing Presidential Nuclear Initiatives (PNI) arrangement could be made legally binding.[3] If we elected to do this, we would create an obligation for verification. When one considers PNIs dealing with naval vessels and verifying the absence of such weapons on board, for example, access to ships is an imperative. Our Navy has always opposed any such measures as an unacceptable level of intrusiveness. It would be surprising for the Navy to change its position regarding on-board ship inspections.

Should we attempt to take another bite of the apple by limiting or eliminating another class of weaponry, such as ballistic missiles with ranges below 500 km? Would it be feasible to confine it to only nuclear capable missiles?

In the NSNW case, the verification obstacles are significant. Two key questions must be addressed: How is nuclear capability determined? What constraints must be placed on the actual warheads to give confidence that circumvention is not occurring?

Another class of weaponry that could be considered is dual capable aircraft (DCA). These are limited under the Conventional Forces in Europe (CFE) Treaty and have been a sore point in U.S.-USSR negotiations since SALT I. In the Russian view, NATO's DCA aircraft are forward based and capable of attacking Russian territory. Thus, they consider them to be strategic in mission.

Sea-launched cruise missiles (SLCMs) will surely come up in the discussions, as well. START took up that issue but was unable to resolve the myriad problems associated with SLCM verification. Consequently, the United States and the Soviet Union agreed to annual declarations of inventories. The verification challenges on SLCMs are well known, haven't changed, and are likely to be determined to be too intrusive to implement.

The Toughest Challenge

Of course, the critical issue in an NSNW agreement would be whether to seek either outright elimination or a declared limit on the number of warheads, including missile warheads and bombs, for theater nuclear forces.

Any agreement that includes inventory limits or outright total elimination will face a significant verification challenge. Limits or elimination would pose essentially the same problems.

In order to be confident of verifying declared limits or complete elimination, a party must have confidence in the baseline number declaration. For example, given the uncertainty in assumed numbers of Russian non-strategic nuclear warheads, assessed to be in the thousands, are there any measures that could enhance confidence and be considered verifiable?

National technical means would be of value in determining signatures associated with storage and production of warheads, but a complementary "anytime, anywhere" suspect site inspection regime would add teeth to the approach. However, as we have seen with the Chemical Weapons Convention, such a broad right to inspect creates significant issues regarding access to certain areas.

Another measure that would demand significant attention is the level of intrusiveness and size criteria. With warheads as the items of inspection, structures, containers, and vehicles large enough to contain (or to be) a warhead would all have to be considered.

A managed access regime similar in concept to that used in the CWC could be considered as a means to limit intrusiveness to highly suspect areas. However, any limits on locations for inspections creates an opportunity for circumvention that can be exploited by a Party not operating in good faith.

Technological measures would have to be part of any accord that seeks to eliminate or limit warheads so that inspections of containers declared to contain or not to contain warheads could be verified. We have some experience in START and INF with use of radiation detection equipment for specific purposes. Such equipment is effective but somewhat limited in application. Other technical devices exist that are more sophisticated in application, but agreement on their use would be problematic due to the potential for compromising sensitive design information.

Effective Verification

Finally, there is a statutory requirement for an assessment of the verifiability of arms control treaties, agreements, or commitments. That is the responsibility of the State Department's Bureau of Verification and Compliance and must accompany the submission of any treaty to the Senate for its advice and consent to ratification.

We should not underestimate the importance the Senate places on verification of arms control agreements in its approval process. One need only look back at the failed effort on the Comprehensive Test Ban Treaty (CTBT) to confirm this.

An assessment of a treaty's verifiability is based upon several inputs, including an assessment of the degree of confidence to which the provisions of any agreement can be monitored, and identification of plausible cheating scenarios. Moreover, it should include an analysis of the capability of the verification regime to deter cheating or be able to detect significant levels of cheating that could affect the military balance. However, our zeal has to be tempered by the fact that the level of intrusiveness

we seek must be balanced by the level of intrusiveness we are prepared to accept.

Without effective verification provisions, confidence that the provisions of a long-term arms control agreement on NSNW are being observed could be significantly eroded over time.

Potential for Managing the Verification Challenge

There is no clear-cut solution to these challenges. But there is a standard tool kit of verification measures that should be evaluated for applicability in any potential arms control negotiation on NSNW.

Verifiability must be considered as a key element from the beginning of negotiations and carried throughout to completion. The penalty for not doing so could be rejection of a hard fought agreement by the Senate. More significantly, the longer term impact of any agreement lacking strong verification measures could be a reduction in our national security.

This challenge is made more difficult by the requirement that, in order to reach agreement, we must also be prepared to set limits on our negotiating objectives, accept that reciprocity will be a key element, know when to compromise, be prepared for an extended negotiation, and recognize a bad deal.

Endnotes

[1] The views expressed herein are solely those of the author and do not represent the position of the U.S. Department of State or the United States government.
[2] States of concern were formerly called “rogue states.”
[3] In 1991 President George Bush announced unilateral reductions in American NSNW and the elimination of all new NSNW programs. Soviet President Mikhail Gorbachev and Russian President Boris Yeltsin reciprocated in announcements in late 1991 and early 1992.