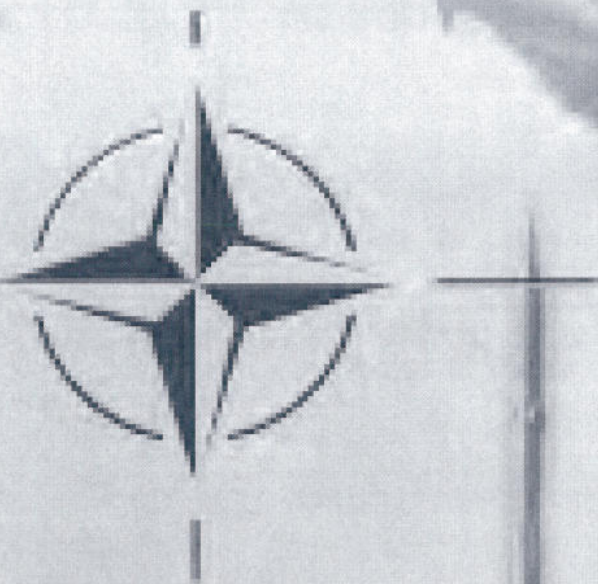


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TACTICAL NUCLEAR WEAPONS AND NATO

**Tom Nichols
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Editors

April 2012

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CHAPTER 19

ARMS CONTROL OPTIONS FOR NON-STRATEGIC NUCLEAR WEAPONS

Steven Pifer

INTRODUCTION

Arms control agreements negotiated between Washington and Moscow over the past 50 years have focused on strategic offensive nuclear arms. Aside from the 1987 treaty banning intermediate-range nuclear force (INF) missiles and related unilateral steps, non-strategic nuclear weapons (NSNWs) have remained outside of arms limitation efforts. Following conclusion of the New Strategic Arms Reduction Treaty (New START) in April 2010, however, President Barack Obama called for including NSNWs in the next round of negotiations. This chapter provides background on NSNWs, reviews U.S. and Russian views on limiting such weapons, and outlines options for dealing with them in arms control arrangements. These options include confidence-building measures, unilateral steps, and negotiated legally binding limits.

The New START Treaty, which entered into force in February 2011, requires that the United States and Russia reduce their strategic offensive forces so that no later than February 2018, each has no more than 700 deployed strategic delivery vehicles—that is, intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs), and nuclear-capable heavy bombers; no more than 800 deployed and nondeployed ICBM and SLBM launchers and nuclear-capable heavy bombers; and no more than 1,550 de-

ployed strategic warheads. The INF Treaty eliminated all ground-launched missiles and launchers for missiles with ranges between 500 and 5,500 kilometers.

The term “non-strategic nuclear weapon” is used here to include nuclear warheads for all delivery systems *not* limited by New START or banned by the INF Treaty. This category of nuclear warheads includes gravity bombs for aircraft other than nuclear-capable heavy bombers, nuclear warheads for naval cruise missiles and torpedoes, and nuclear warheads for anti-ballistic missile (ABM) and air defense systems. The NSNWs term would also capture any nuclear warheads for surface-to-surface missiles with ranges less than 500 kilometers and nuclear artillery shells, should such weapons remain in the arsenals.¹ NSNWs are also referred to as tactical or sub-strategic nuclear weapons.²

As a result of its 2010 *Nuclear Posture Review* (NPR), the U.S. Department of Defense announced that it would retire and place in the dismantlement queue the nuclear warheads for its sea-launched cruise missiles. This leaves the U.S. non-strategic nuclear arsenal consisting solely of B-61 gravity bombs. The Russians maintain a larger and more diverse non-strategic nuclear inventory, including gravity bombs plus nuclear warheads for torpedoes, sea-launched cruise missiles, ABM, and air defense systems, and possibly other kinds, totaling as many as 3,700-5,400 warheads. Many of those may be old and nearing retirement; the “nominal” load of Russian non-strategic nuclear delivery vehicles is believed to be around 2,100 warheads.³

U.S. AND RUSSIAN NON-STRATEGIC NUCLEAR WEAPONS

The United States plans to conduct a life-extension program for its B-61 bombs over the coming decade, which will take the three non-strategic variants and one strategic variant of the weapon and produce a single variant, the B-61-12.⁴ (This will have the effect of blurring the distinction between strategic and non-strategic nuclear warheads.) Russian nuclear warheads generally have a shorter shelf life than their American counterparts, and the Russian practice is to retire old warheads and build new ones to replace them. While Moscow has not disclosed plans for its future non-strategic arsenal, some experts believe the Russians will replace their aging non-strategic nuclear warheads at a less than one-for-one rate, which would lead over time to a reduction in the overall size of their non-strategic nuclear stockpile. (See Table 19-1.)

Weapons	U.S.	Russia
Air-Delivered	500	800
ABM or Air Defense	0	700
Ground-Based	0	? ⁵
Naval	0	600
Total	500	~2100

Table 19-1. U.S. and Russian Non-Strategic Nuclear Weapons.⁶

Of the 500 U.S. B-61 gravity bombs, some 200 are believed to be deployed forward at six air bases in Europe: one each in Belgium, Germany, the Netherlands, and Turkey and two in Italy. These weapons are designated for use by the U.S. Air Force and, un-

der programs of cooperation, the Belgian, German, Dutch, and Italian air forces, which have dual-capable aircraft (DCA) that can deliver conventional or nuclear weapons.⁷ There is no unclassified breakdown of the number of NSNWs in the European part of Russia, though Russia has national-level nuclear storage sites plus naval and air force nuclear storage sites on its European territory, including some sites situated close to North Atlantic Treaty Organization (NATO) allies such as the Baltic states and Norway.

Most, if not all, Russian non-strategic nuclear warheads are believed to be “demated” or separated from their delivery systems. U.S. non-strategic weapons are also demated in that no U.S. B-61 bombs are deployed on aircraft, though in Europe they are reportedly stored in warhead vaults in hangars that can house U.S. or allied delivery aircraft.

U.S. Views on Non-Strategic Nuclear Weapons.

President Obama in his April 5, 2009, speech in Prague called for reducing the number and role of nuclear weapons in U.S. national security strategy, a view echoed 1 year later in the *Nuclear Posture Review*. When signing the New START Treaty on April 8, 2010, the President noted, “As I said last year in Prague, this treaty will set the stage for further cuts. And going forward, we hope to pursue discussions with Russia on reducing both our strategic and tactical weapons, including nondeployed weapons.”⁸

Were the Russians to agree, this would mean that, for the first time, the United States and Russia would be negotiating on all nuclear weapons in their arsenals with the exception of those retired and in the queue for dismantlement. The rationale for bringing NSNWs

into the discussion is that it would be difficult in a new agreement to reduce deployed strategic nuclear warheads to a level below the New START limit of 1,550 without addressing the thousands of NSNWs (and nondeployed strategic warheads) in the sides' arsenals. Indeed, a primary critique of New START during the 2010 Senate ratification debate was that it failed to deal with non-strategic weapons; the treaty's ratification resolution required that the administration seek within 1 year of New START's entry into force to initiate negotiations to reduce the disparity between the United States and Russia in such arms.

Anticipating possible new negotiations with Russia, the administration in February 2011 set up inter-agency working groups to explore options for addressing NSNWs and to examine the kinds of verification measures that would be necessary to monitor limits on them. On March 29, 2011, U.S. National Security Advisor Tom Donilon said that reciprocal transparency on the "numbers, types, and locations of non-strategic forces in Europe" should be an initial step in getting ready for negotiations on such systems.⁹ U.S. officials raised the subject of NSNWs in consultations with their Russian counterparts over the course of 2011, but there was no indication of an agreement to address these in a more formal negotiation.

NATO considerations will factor heavily in the U.S. arms control approach on NSNWs. The November 2010 NATO summit produced a new *Strategic Concept*, which reaffirmed the importance of nuclear deterrence for Alliance security. It also noted that NATO would "seek to create the conditions for further reductions [of nuclear weapons stationed in Europe] in the future," adding that the Alliance should "seek Russian agreement to increase transparency

on its nuclear warheads in Europe and relocate these weapons away from the territory of NATO members. Any further steps must take into account the disparity with the greater Russian stockpiles of short-range nuclear weapons.”¹⁰

NATO leaders also agreed to launch a Deterrence and Defense Posture Review (DDPR), which is to examine the “appropriate mix” of nuclear, conventional, and missile defense forces for the Alliance. The review is to be concluded by the May 20, 2012, NATO summit in Chicago, IL.

NATO allies hold a range of views on the need for American nuclear weapons deployed forward in Europe. Some allies, such as Germany, the Netherlands, and Belgium, see no territorial threat to the Alliance that requires U.S. nuclear weapons in Europe. The German air force is replacing its *Tornado* aircraft with *Eurofighters* – which will not be wired to carry nuclear weapons – and thus will lose its nuclear role when the *Tornadoes* are retired. The German decision could have a major, if not decisive, impact on Dutch and Belgian decisions about whether to retain a nuclear role for their air forces, which could in turn affect Italian and Turkish views on maintaining nuclear weapons on their territory. If decisions by individual NATO members lead to the abandonment of DCA, NATO could find itself disarming by default.

Other allies, including the Baltic states and countries in Central Europe, see a continued need for U.S. nuclear weapons in Europe as a means of underscoring the U.S. security commitment to NATO. Their view is shaped by concern that Russia might still pose a threat to their security. Russian statements on missile defense such as the one by President Dmitry Medvedev on November 23, 2011, threatening to tar-

get missiles on NATO countries hosting U.S. missile defense elements, fuel this concern.

It is doubtful that the DDPR will resolve the differences among Alliance members regarding threat perceptions and the need for U.S. nuclear weapons, and doubtful as well that it will go on to produce a final decision on whether or not U.S. nuclear weapons should remain deployed in Europe. It is more likely that the review will defer difficult questions – the DCA issue could be kicked down the road as the *Tornado* will remain in the German inventory until 2020-25 – and include language, building on that in the *Strategic Concept*, linking measures on U.S. NSNWs to steps by Russia regarding its non-strategic arsenal.

Such an outcome may be desirable for preserving flexibility for U.S. negotiators in a future negotiation with the Russians. If NATO were to decide at the Chicago summit to remove some or all U.S. NSNWs from Europe, that would reduce the bargaining chips in the U.S. negotiators' hands. If the Alliance were alternatively to decide that some U.S. nuclear weapons must remain in Europe for the foreseeable future, that would make it difficult for U.S. negotiators to explore what Russia might offer for removal of the B-61 bombs.

Russian Views on Non-Strategic Nuclear Weapons.

Although President Medvedev committed along with President Obama in April 2009 to a step-by-step process aimed at reducing, and ultimately eliminating, nuclear weapons, the Russians in 2011 showed little enthusiasm for engaging in early negotiations on further nuclear arms reductions of any kind. Instead, Moscow linked further reductions to concurrent or prior steps on a range of other questions. On March 1,

2011, Foreign Minister Sergey Lavrov declared at the United Nations (UN) Conference on Disarmament in Geneva:

We insist that there is a clear need to take into account the factors that negatively affect strategic stability, such as plans to place weapons in outer space, to develop non-nuclear arms strategic offensive weapons, as well as unilateral deployment of a global BMD [ballistic missile defense] system. Nor could we ignore the considerable imbalances in conventional arms, especially against the backdrop of dangerous conflicts persisting in many regions of the world.¹¹

Other Russian officials have reiterated this linkage but have not painted a clear path forward for untangling the bundle of questions. This may reflect uncertainty in Moscow as to where to go next on nuclear arms reductions. Russian officials have indicated privately that, before proceeding too far on a new negotiation, Moscow would want to know who will occupy the White House after the November 2012 U.S. election.¹²

The one specific position that the Russians have put forward on NSNWs is to call for their removal to national territory as a *precondition* for any negotiation on such weapons. Moscow likely understands that Washington will not accept that as a precondition.

Part of the Russian uncertainty about next steps on nuclear reductions undoubtedly stems from their concern about perceived disadvantages vis-à-vis NATO and Chinese conventional military forces. Russian conventional force capabilities declined dramatically after the collapse of the Soviet Union in 1991, and Russia lags the United States particularly in the area of high-tech, precision-guided weapons. Russian of-

officials have announced a major 10-year rearmament program aimed at refitting the military with more advanced arms by 2020, along with an ongoing program of military reforms, but many analysts doubt that Moscow will fully achieve its ambitious goals.¹³

Given their conventional force weaknesses, the Russians may believe that they must rely more on nuclear forces—including NSNWs—than in the past (in much the same way that NATO during the Cold War depended on nuclear weapons to offset conventional force imbalances vis-à-vis the Soviet Union and Warsaw Pact). The 2010 Russian military doctrine stated:

The Russian Federation reserves the right to utilize nuclear weapons in response to the utilization of nuclear and other types of weapons of mass destruction against it and (or) its allies, and also in the event of aggression against the Russian Federation involving the use of conventional weapons when the very existence of the state is under threat.¹⁴

It remains unclear, however, what rationale the Russians have for maintaining such a large number of NSNWs. NATO regards its non-strategic weapons as almost solely political in purpose; in a conflict, their use would aim primarily to signal the danger of escalation to a strategic nuclear exchange. Even if the Russian military regards its NSNWs more in military than in political terms—as it probably does—the number in their arsenal remains difficult to justify. In what plausible scenario would Russian military planners envisage the use of hundreds of non-strategic nuclear warheads?

General Arms Control Considerations.

If and when the United States and Russia discuss arms control for NSNWs—be it confidence-building measures, parallel unilateral steps, or legally binding negotiated limits—several considerations likely would apply. First, in contrast to New START, which constrains deployed strategic warheads and deployed strategic delivery vehicles such as ICBMs, the sides likely would focus on non-strategic nuclear warheads themselves and not seek to limit the delivery vehicles for such warheads. Neither the U.S. nor Russian militaries would want to reduce or constrain delivery systems that have primarily conventional missions and roles.

Second, the sides would have to decide whether to take a global or regional approach. While the NATO *Strategic Concept* might be read to imply a regional approach, the transportability of non-strategic nuclear warheads argues for global limitations. For example, an agreement limiting the number of non-strategic nuclear arms in Europe could be readily undercut by the ability of the United States to move warheads into Europe from bases in the United States and of Russia to move them from the Asian part of Russia.

Moreover, U.S. allies in Asia, particularly Japan, would object strongly to an agreement that had the effect of pushing Russian nuclear weapons out of Europe to Asian sites east of the Ural Mountains, which could increase the nuclear risk to them. During the INF negotiations in the 1980s, the Japanese government not only insisted that an agreement not increase the threat in Asia, it pressed for reductions of Soviet INF missiles in Asia proportional to the cuts being negotiated for Soviet INF missiles in Europe (in the end,

the INF Treaty banned all INF missiles, regardless of location). Japanese diplomats have already raised this point with U.S. and NATO officials, and Washington likely will be sensitive to Tokyo's concern.

Third, any agreement limiting non-strategic nuclear arms would have to include *de jure* equality of limits for the United States and Russia. Any disparity in Russia's favor in a legally binding treaty would not be ratifiable in the U.S. Senate. For its part, Russia would likewise insist that it have equal rights with the United States.

Fourth, limits on NSNWs would require new verification provisions. The verification challenge posed by these weapons is that most or all are separated from delivery systems, which as noted above the sides would not wish to limit. Counting deployed strategic warheads under New START is made easier by their association with deployed strategic delivery vehicles, such as ICBMs and SLBMs, which can be located using national technical means of verification. But monitoring treaty limits on NSNWs would almost certainly require the negotiation of measures allowing the counting and inspection of nuclear warheads in storage facilities. This is not an insoluble problem—Washington and Moscow have accepted increasingly intrusive verification steps over the past 50 years—but it would mean breaking new verification ground.

Even with the design of new verification measures, there still may be a question regarding monitoring confidence. The U.S. military and intelligence community believe that the New START limit on deployed strategic warheads can be monitored with high confidence. This stems in large part from the association of deployed strategic warheads with deployed strategic delivery vehicles. Absent an "anytime, anywhere"

inspection regime—which neither side likely could agree to at present—the sides would have less confidence in their ability to monitor limits on non-strategic nuclear warheads, which could be hidden much more easily than could ICBMs or SLBMs.

ARMS CONTROL OPTIONS

Confidence-Building Measures.

This chapter breaks down arms control options for NSNWs into three categories: confidence-building measures, unilateral steps (including parallel unilateral steps), and negotiated legally binding limits of a kind suitable for a treaty. Confidence-building measures include transparency steps, demating warheads, and relocating and consolidating warhead storage sites.

Transparency. Transparency would be one confidence-building measure. National Security Advisor Donilon proposed transparency regarding the “numbers, types, and locations” of NSNWs in Europe. An April 14, 2011, paper prepared by Poland, Norway, Germany, and the Netherlands, and endorsed by 10 NATO permanent representatives, called additionally for transparency regarding the command and control arrangements and operational status, concluding:

Initial exchanges on conditions and requirements for gradual reductions of tactical nuclear weapons in Europe could be initiated as part of the process of enhancing transparency. In a first phase it would be useful to clarify the number of weapons that have already been eliminated and/or put into storage by the U.S. and the Russian Federation as a result of the PNIs [presidential nuclear initiatives] of 1991-1992.¹⁵

Others have also suggested that transparency regarding the implementation of the presidential nuclear initiatives (PNIs) could be a relatively simple initial step, since this would require the sharing solely of historical data.¹⁶ Some Russian officials have suggested in private that transparency would be a logical first step on NSNWs.

Greater transparency regarding non-strategic weapons could be useful for several reasons. It would allow U.S. and Russian officials to shape better informed proposals for any formal negotiation and would provide, were a treaty to be concluded, the foundation for a data base that would likely be an essential element of the agreement. Greater transparency could also give the sides confidence that other confidence-building measures or unilateral steps were being implemented.

Demating. A second confidence-building measure would be for the sides to demate or separate non-strategic nuclear warheads from delivery systems. Removing the warheads would mean that it would take more time for them to be prepared for use. Since this may already be the operational practice on both sides, such a confidence-building measure would merely codify that practice. It could build confidence, though the military utility of such a measure would be less to the extent that nuclear warheads continued to be co-located on bases with their delivery systems.

Relocation/Consolidation. A third confidence-building measure would be to relocate and consolidate non-strategic nuclear warheads. In its *Strategic Concept*, NATO called for Russia to move its nuclear weapons away from the NATO-Russia border. This appears to be a particular concern for the Baltic states, and the

Poles remain wary of past suggestions by Russia that it might deploy nuclear weapons in Kaliningrad on the northern Polish border. If, as some analysts believe, Russia will be reducing the number of its NSNWs, relocation and consolidation might be possible on the Russian side. (As noted above, Japan would be concerned about measures that relocated nuclear weapons to sites east of the Urals, but Russia has nuclear storage sites in the European part of Russia that are well away from NATO member states.) Russia likely would not be willing to remove non-strategic (or strategic) warheads from the Kola Peninsula, but ending the storage of warheads close to the Baltic states could have a useful political impact.

Relocation and consolidation would be a more difficult proposition for the United States and NATO. Consolidation of warheads at fewer sites in Europe could end U.S. nuclear deployments in one or more countries. This could prove problematic for European governments: the basing of U.S. nuclear weapons in Germany and Belgium, for example, makes it easier for the Netherlands to host U.S. nuclear weapons, and vice versa. If the weapons were to be withdrawn from Germany, political pressure in the Netherlands and Belgium for a similar withdrawal would grow. U.S. and NATO officials worry that it would not be feasible to consolidate the weapons from locations in five countries to four because the reduction would not stop there—it could go instead from five to two, and perhaps to one or zero.

Unilateral Measures. A second set of arms control options is unilateral measures, perhaps conducted in parallel. Possible unilateral measures include a U.S./NATO decision to unilaterally withdraw U.S. nuclear weapons from Europe, a unilateral no-increase commitment, and parallel unilateral reductions. As an ex-

ample of the latter, in 1991 Presidents George H. W. Bush and Mikhail Gorbachev announced their presidential nuclear initiatives, a series of unilateral steps that eliminated thousands of nuclear weapons on both sides, including dramatic reductions in the two non-strategic nuclear arsenals.

U.S. Nuclear Withdrawal from Europe. One unilateral measure would be for the United States and NATO to agree unilaterally to withdraw some number of – but not all – B-61 bombs from Europe. Those weapons are seen as having virtually no military utility in the context of the full array of nuclear and conventional arms maintained by the U.S. military; their primary value is political, symbolizing the U.S. security commitment to Europe. If the primary rationale for the weapons is political, there may be nothing magic about the current number of 200. Indeed, even officials of NATO allies that wish a continued nuclear presence see the possibility for some reduction.

A more radical unilateral measure would be the removal of *all* U.S. nuclear weapons from Europe, in which case the U.S. extended nuclear deterrent would be based on the Asian model, i.e., extended deterrence for countries such as Japan and South Korea as provided by U.S. strategic nuclear forces and forward-deployable non-strategic nuclear weapon systems based in the United States. Such a move, however, would likely encounter opposition from a number of NATO allies who, under current circumstances, continue to value an American nuclear presence in Europe. It likely would also prove controversial in the U.S. Congress, which has expressed doubts about unilateral measures and would be sympathetic to views in the Baltic states and Central Europe. Moreover, it is unclear at this point whether such a unilateral U.S. move would elicit a *quid pro quo* from Russia other than an agreement to

negotiate. While some U.S. officials believe the United States should size its overall nuclear arsenal strictly according to its calculation of deterrence needs, other U.S. officials would not support unilateral withdrawal even if deterrence was not degraded, believing that it would sacrifice a potential bargaining chip in any future negotiation with the Russians.

No Increase Commitment. A second unilateral measure which the sides might adopt in parallel would be a policy of avoiding an increase in the number of NSNWs. The United States has no plans for any such increase, and Russia presumably has no need to, given its large current arsenal. Such a measure might be relatively easy to adopt, but given its minimal practical impact, its political effect or contribution to confidence-building would be small.

A no-increase commitment might be matched with a commitment not to modernize non-strategic weapons, which would appear to be a more robust measure. Any commitments in this regard, however, could be difficult to square with the U.S. B-61 life-extension program and the Russian practice of building new warheads to replace old weapons. It is unclear, moreover, how the sides could be sure that a no-modernization commitment was being observed. Neither likely would be prepared to extend transparency to cover life-extension or production programs for nuclear weapons.

Parallel Unilateral Reductions. Another unilateral measure would be parallel unilateral reductions, under which the United States and Russia would each announce separate policy decisions to reduce its non-strategic nuclear arsenal, as was done by Presidents Bush and Gorbachev in 1991. One such possibility would be for Washington and Moscow each to state that it would reduce the number of its NSNWs by a

certain percentage, say 50 percent. Given the large disparity in U.S. and Russian arsenals, the outcome would be unequal and thus not appropriate for incorporation in a formal treaty, but such a measure might be a positive interim step.

Negotiated Legally Binding Limits.

Negotiated legally binding limits in a treaty could take several forms. The limits might apply just to non-strategic nuclear warheads, or they might cover non-strategic warheads along with all nuclear warheads in a single group. Other possible limits could constrain non-strategic nuclear warheads to declared storage sites or to national territory. A more ambitious approach would be to fold U.S. and Russian non-strategic nuclear warheads into a negotiation that also involved conventional forces.

Separate Limit. One approach would be to negotiate a limit that applied only to U.S. and Russian non-strategic nuclear warheads, that is, all nuclear warheads except for those captured by the New START Treaty. Although this would be the most straight-forward way to limit non-strategic warheads, the huge numerical disparity between the U.S. and Russian arsenals – Russia holds an advantage ranging from four-to-one to ten-to-one, depending on how Russian weapons are counted – would make negotiation of a *de jure* equal limit very problematic, if not impossible.

Even were Washington and Moscow able to agree to an equal limit, the *de facto* outcome would likely generate criticism on one side or the other, if not both. For example, a limit of 1,000 non-strategic nuclear warheads could produce criticism in the U.S. Congress for its codification of a two-to-one Russian advan-

tage, since the United States has no plans to increase its non-strategic arsenal above 500 warheads. Critics in Moscow, on the other hand, would complain that the agreement forced only Russian reductions while allowing the United States the latitude to double its non-strategic arsenal.

Single Limit on All Nuclear Warheads. An alternative approach would be to negotiate a single limit covering all U.S. and Russian nuclear warheads: deployed strategic warheads, nondeployed strategic warheads, and non-strategic nuclear warheads, everything in the inventory except for those warheads that have been retired or are awaiting dismantlement (these might be limited under a separate regime). This single limit could be combined with a sublimit on the number of deployed strategic warheads. For example, the approach could constrain the United States and Russia each to no more than 2,500 total nuclear warheads, with a sublimit of no more than 1,000 deployed strategic warheads (the latter would amount to a reduction of about 35 percent from New START's level of 1,550 deployed strategic warheads).

The primary advantage of this approach is that it could create an important bargaining possibility. The United States under New START will have a significant advantage in nondeployed strategic warheads, and most, if not all, of its ICBMs and SLBMs will have been "downloaded," i.e., they will carry fewer warheads than their capacity. That allows the possibility to "upload" or put additional warheads back onto the missiles. The Minuteman III ICBM has a capacity of three warheads, but the U.S. Air Force plans to deploy each missile with only a single warhead. The Trident D-5 SLBM, which can carry as many as eight warheads, will have an average load of four-five war-

heads. Nondeployed strategic warheads will be stored and could, if New START broke down, be returned to missiles. The Russians appear to be implementing their New START reductions by eliminating missiles; the missiles remaining in the force will carry mostly full loads and thus could not be uploaded with additional warheads.

This gives the United States a numerical advantage in a category of strategic nuclear warheads to offset the Russian numerical advantage in non-strategic nuclear warheads. Assuming the United States and Russia each made full use of its permitted 1,000 deployed strategic warheads under the sublimit, the overall limit of 2,500 would allow each to choose its preferred mix of nondeployed strategic warheads and non-strategic nuclear warheads to make up the additional 1,500 warheads. The U.S. military might prefer to keep more nondeployed strategic warheads, while the Russian military chose to keep more non-strategic nuclear warheads. This approach would create a bargaining opportunity that would not be possible were strategic and non-strategic warheads addressed and limited separately. While letting each side keep more of its preferred warhead type, both would have to reduce their numbers to well below current levels.

Limit to Declared Centralized Storage Sites. Some nonofficial Russian experts believe that negotiating a numerical limit and associated verification measures to apply to non-strategic nuclear warheads would be too challenging and time-consuming. They therefore suggest that the sides instead negotiate a regime that would limit non-strategic nuclear warheads to declared centralized storage sites that would be located at some distance from non-strategic delivery systems.¹⁷ Verification measures could be applied to

confirm that warheads were not removed from these sites and perhaps to confirm the absence of nuclear warheads at emptied storage sites, but the measures would not seek to confirm the total number of warheads for purposes of a numerical limit in a treaty.

While the separation of non-strategic nuclear warheads from their delivery systems would be a positive step, the warheads would continue to exist and constitute a latent nuclear capacity that could augment deployed strategic warheads. As noted earlier, it may be difficult to reduce the New START limit of 1,550 deployed strategic warheads without negotiating numerical reductions in and limits on the large existing stockpiles of non-strategic nuclear warheads (and nondeployed strategic warheads).

Such an approach furthermore would be difficult for NATO to implement if the United States continued to maintain B-61 bombs in Europe. The locations where U.S. nuclear weapons are currently stored reportedly are all at military air bases, so an approach limiting nuclear warheads to declared centralized storage sites would require construction of a new site(s) for holding those weapons. That could prove costly and very difficult politically.

Limit to National Territory. Were the United States and Russia to get into serious negotiations on NSNWs, Moscow almost certainly would insist, as an element of any agreement, on a provision requiring that all nuclear warheads be based on national territory. That would require the removal of U.S. B-61 bombs from Europe. The United States should be prepared to consider this in the context of the right treaty. In private conversations, U.S. officials do not exclude this as a possible outcome, *depending on the other elements of the agreement*. NATO reactions would likely figure heav-

ily in Washington's judgment, and those reactions—like the reactions of U.S. officials—would be shaped by what the Russians in the overall agreement were prepared to offer in return.

A variant of this approach would be to require that all nuclear warheads be based on national territory but allow for their temporary deployment overseas. New START offers a precedent: Article IV requires that all strategic delivery vehicles be based on national territory with the proviso that heavy bombers may deploy temporarily outside of national territory with notification to the other side. Assuming that the necessary infrastructure was maintained at some European air bases, such a provision in a new agreement would allow the theoretical possibility to return U.S. non-strategic nuclear warheads to Europe in a crisis, which might have some political value for assurance within NATO. The notification requirement presumably would pose no problem, since the principal point of returning the weapons would be to send a political signal regarding U.S. support and the risk of further escalation. However, such a scenario might prove implausible politically; most analysts doubt that in such a crisis NATO would be able to find consensus on a proposed response that would be seen by some allies as a risky and provocative move.

Negotiate in Broader Format. Finally, one further negotiated approach for dealing with U.S. and Russian non-strategic nuclear warheads would be to fold them into broader NATO-Russia or European negotiations along with conventional military forces. The logic here would be that, to the extent that Moscow believes its requirement for non-strategic nuclear warheads is driven by its conventional force disadvantages, such a negotiation could trade off nuclear reductions for

conventional force cuts. In the Mutual and Balanced Force Reduction Talks that preceded the negotiation on the Conventional Armed Forces in Europe (CFE) Treaty, NATO at one point offered to withdraw 1,000 U.S. nuclear warheads from Europe in return for Soviet removal of a number of tank divisions from Central Europe.

While this approach has some logic, Moscow suspended its observance of the CFE Treaty in early 2008, and NATO and Russia have not succeeded in finding a way to restore the conventional forces arms control regime. The United States and United Kingdom announced in November 2011 that they were suspending certain CFE Treaty obligations with regard to Russia. Dealing with non-strategic nuclear warheads in a nuclear arms reduction agreement would be difficult enough even without bringing in the added complications raised by conventional force questions.

Negotiating Prospects.

The near-term prospects for addressing non-strategic nuclear warheads, either in a negotiated agreement or parallel unilateral measures, appear limited in 2012. Moscow is uncertain about next steps in nuclear force reductions and, in any event, likely will not take dramatic new steps until the Russians know the winner of the November 2012 U.S. presidential election. To the extent that the White House worries that arms control might become an issue in the U.S. presidential campaign, the administration probably will not offer major new ideas either.

Should President Obama be reelected, he has already indicated his desire to address non-strategic nuclear weapons. The specific view of a possible Re-

publican president is less clear at this point. Many Republicans appear skeptical of the benefits of negotiated arms control, though one of the primary Republican criticisms of New START was that it did not address NSNWs.

On the Russian side, there may well be incentives in the medium term for negotiations on non-strategic nuclear arsenals. Under New START, the U.S. military will have little difficulty maintaining its full allotments of 700 deployed strategic delivery vehicles and 1,550 deployed strategic warheads. According to the September 2011 New START data exchange, Russia is already well below the 700 limit, with just 516 deployed strategic delivery vehicles. Some analysts have predicted that Russian deployed strategic delivery vehicles will fall to as low as 400, with only 1,250-1,350 deployed strategic warheads.¹⁸ Alexei Arbatov believes the warheads could fall to as low as 1,000-1,100.¹⁹ This situation could lead Moscow to decide to build back up to its New START limits. Alternatively, the Russians could seek to negotiate the limits down. Russian officials are also concerned about the U.S. advantage in nondeployed strategic warheads and upload capacity. These questions give U.S. negotiators leverage that—along with Moscow's desire to see U.S. NSNWs withdrawn from Europe—could be used to get Russia to reduce its overly large stock of non-strategic nuclear arms.

U.S. officials hope to hold increasingly substantive consultations with their Russian counterparts in 2012, which might prepare the ground for more serious engagement. But formal proposals and structured negotiations that might include non-strategic nuclear weapons likely will not get underway until sometime in 2013 at the earliest.

ENDNOTES - CHAPTER 19

1. The Russian presidential nuclear initiatives in 1991 included elimination of all ground-launched tactical warheads, but there have been questions as to whether some of these warheads may remain in the Russian inventory.

2. There is no agreed terminology between the United States and Russia on categorizing these weapons.

3. Hans M. Kristensen and Robert Norris, "Russian Nuclear Forces, 2011," *Bulletin of the Atomic Scientists*, Vol. 67, No. 3, May 2011, pp. 71-73.

4. Hans M. Kristensen, "B61 LEP: Increasing NATO Nuclear Capability and Precision Low-Yield Strikes," FAS Strategic Security Blog, June 15, 2011, available from www.fas.org/blog/ssp/2011/06/b61-12.php.

5. It is unclear whether the Russian Iskandr surface-to-surface missile has a nuclear warhead.

6. Kristensen and Norris, "Russian Nuclear Forces, 2011."

7. Hans M. Kristensen and Robert S. Norris, "U.S. Tactical Nuclear Weapons in Europe, 2011," *Bulletin of the Atomic Scientists*, Vol. 67, No. 1, January 2011, pp. 64-73.

8. Office of the Press Secretary, Remarks by President Obama and President Medvedev of Russia at New START Treaty Signing Ceremony and Press Conference, Prague," Washington, DC: The White House, April 8, 2010.

9. Remarks as Prepared for Delivery by Tom Donilon, National Security Advisor to the President, "The Prague Agenda: The Road Ahead," Washington, DC: The White House, Carnegie International Nuclear Policy Conference, March 29, 2011.

10. "Strategic Concept for the Defense and Security of the Members of the North Atlantic Treaty Organization," adopted by Heads of State and Government in Lisbon, Portugal, November 19, 2010.

11. Ministry of Foreign Affairs of the Russian Federation, Information and Press Department, "Statement by Mr. Sergey Lavrov, Minister of Foreign Affairs of the Russian Federation, at the Plenary meeting of the Conference on Disarmament, Geneva, Switzerland, March 1, 2011," available from www.in.mid.ru/bdomp/brp_4.nsf/e78a48070f128a7b43256999005bcbb3/2de66a92e764dbb8c3257846004dfd44!OpenDocument.

12. Conversations with senior Russian officials in Moscow and Washington, May and August 2011.

13. For a more detailed discussion of how Russian conventional force weaknesses may shape their views on nuclear forces, see Roger N. McDermott, "Russia's Conventional Military Weakness and Substrategic Nuclear Policy," Fort Leavenworth, KS: The Foreign Military Studies Office.

14. "The Military Doctrine of the Russian Federation," approved by Russian Presidential Edict on February 5, 2010.

15. "Non-Paper submitted by Poland, Norway, Germany, and the Netherlands on Increasing Transparency and Confidence with Regard to Tactical Nuclear Weapons in Europe," April 14, 2011.

16. See Madeleine Albright and Igor Ivanov, "Moving Ahead on Reducing Nuclear Arms," *International Herald Tribune*, April 7, 2011.

17. See, for example, Alexei Arbatov, "Gambit or Endgame: The New State of Arms Control," *The Carnegie Papers*, Moscow, Russia: Carnegie Moscow Center, March 2011, pp. 31-33; and Anatoliy S. Diakov, "Verified Reductions in Non-strategic Nuclear Weapons," Moscow, Russia: Center for Arms Control, Energy and Environmental Studies, Moscow Institute for Physics and Technology, February 18, 2011, available from www.armscontrol.ru/.

18. See, for example, Pavel Podvig, Russian Strategic Nuclear Forces, "New START Treaty in Numbers," available from *www.russianforces.org/blog/2010/03/new_start_treaty_in_numbers.shtml*.

19. Alexei Arbatov, "Gambit or Endgame," pp. 13-14.