(2)

STUDY PROJECT

START: THE BEGINNING OR THE END TO ARMS CONTROL

BY

LIEUTENANT COLONEL NICHOLAS J. CICCARELLO
United States Army

USAWC CLASS OF 1991

U.S. ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013-5050

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION Unclassified	1b RESTRICTIVE MARKINGS
2a. SECURITY CLASSIFICATION AUTHORITY	3 DISTRIBUTION / AVAILABILITY OF REPORT Approved for public release. Distribution is unlimited.
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE	
4. PERFORMING ORGANIZATION REPORT NUMBER(S)	5. MONITORING ORGANIZATION REPORT NUMBER(S)
6a. NAME OF PERFORMING ORGANIZATION U.S. Army War College 6b. OFFICE SYMBOL (*If applicable*)	7a. NAME OF MONITORING ORGANIZATION
6c. ADDRESS (*City, State, and ZIP Code*) Carlisle Barracks, PA 17013	7b ADDRESS (*City, State, and ZIP Code*)
8a. NAME OF FUNDING / SPONSORING ORGANIZATION 8b. OFFICE SYMBOL (*If applicable*)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c. ADDRESS (*City, State, and ZIP Code*)	10. SOURCE OF FUNDING NUMBERS PROGRAM ELEMENT NO. / PROJECT NO. / TASK NO. / WORK UNIT ACCESSION NO.

11. TITLE (*Include Security Classification*)
START, The Beginning or the End of Arms Control

12. PERSONAL AUTHOR(S)
LTC Nicholas J. Ciccarello, USA

13a. TYPE OF REPORT	13b. TIME COVERED	14. DATE OF REPORT (*Year, Month, Day*)	15. PAGE COUNT
Study Project	FROM _____ TO _____	91/03/30	~~35~~ 32

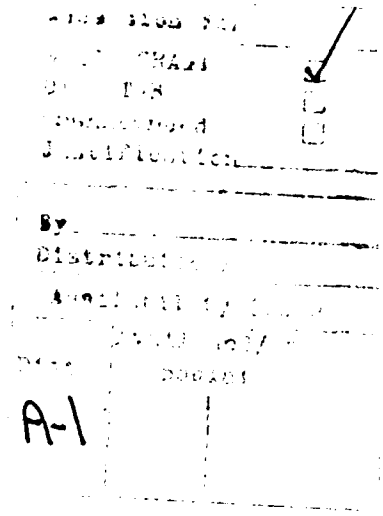
16. SUPPLEMENTARY NOTATION

17. COSATI CODES			18. SUBJECT TERMS (*Continue on reverse if necessary and identify by block number*)
FIELD	GROUP	SUB-GROUP	

19. ABSTRACT (*Continue on reverse if necessary and identify by block number*)

The Strategic Arms Reduction Talks or START, initiated in June 1982, are negotiations between the United States and the Soviet Union which seek reductions in their strategic offensive arsenals. Arms control has been a key objective of our national security strategy. This paper focuses on the START negotiations, viewing them as a microcosm of the arms control process. It addresses the goals of arms control and the status of the current treaty. In viewing the history of START, the longest negotiated yet unsigned treaty to date, the paper identifies factors that have affected the negotiations and the arms control process. The study then looks at two key issues, the SS-18 and verification regimes which may have significant impact specifically on the future of START and in general the future of arms control.

20 DISTRIBUTION / AVAILABILITY OF ABSTRACT	21 ABSTRACT SECURITY CLASSIFICATION	
☐ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT ☐ DTIC USERS	Unclassified	
22a. NAME OF RESPONSIBLE INDIVIDUAL COL MARK R. WALSH	22b TELEPHONE (*Include Area Code*) 717-245-3022	22c. OFFICE SYMBOL AWCAB



USAWC MILITARY STUDIES PROGRAM PAPER

START: THE BEGINNING OR THE END TO ARMS CONTROL

AN INDIVIDUAL STUDY PROJECT

by

Lieutenant Colonel Nicholas J. Ciccarello, USA

Colonel Mark R. Walsh
Project Advisor

U.S. Army War College
Carlisle Barracks, Pennsylvania 17013
30 March 1991

ABSTRACT

AUTHOR: Nicholas J. Ciccarello, LTC, USA

TITLE: START: The Beginning or the End to Arms Control

FORMAT: Individual Study Project

DATE: 30 March 1991 PAGES: 35 CLASSIFICATION: Unclassified

The Strategic Arms Reduction Talks or START, initiated in June 1982, are negotiations between the United States and the Soviet Union which seek reductions in their strategic offensive arsenals. Arms control has been a key objective of our national security strategy. This paper focuses on the START negotiations, viewing them as a microcosm of the arms control process. It addresses the goals of arms control and the status of the current treaty. In viewing the history of START, the longest negotiated yet unsigned treaty to date, the paper identifies factors that have affected the negotiations and the arms control process. The study then looks at two key issues, the SS-18 and verification regimes which may have significant impact specifically on the future of START and in general the future of arms control.

Introduction

On 18 November 1981, President Ronald Reagan delivered a speech on arms reduction to the National Press Club. Within this speech he inaugurated a new direction and new term in arms control - Strategic Arms Reduction Talks or START.[1] He alluded to and compared the significance of achieving agreement with the Soviets in reducing the "dread threat of nuclear war" to Neil Armstrong's first footstep on the moon, which was a giant step for mankind. On this same day, he offered to cancel deployment to Europe of the Pershing II missile if the Soviets dismantled their intermediate-range land-based nuclear missile. This proposal, which later became known as the Intermediate-Range Nuclear Forces(INF) Treaty, took six years to negotiate and was finally signed by President Reagan and General Secretary Gorbachev on 8 December 1987. Now three years old, it is accomplishing the stated goals of destruction of all ground-based missiles with ranges between 500-5,500 kilometers, and it will remain in force for ten more years. Both initiatives were key elements to the U.S. arms control process. The INF Treaty appears to be accomplishing its goals. Unfortunately, the same can not be said for the START Treaty.

As already noted, START was born during the Reagan administration. Prior to assuming the Presidency, Ronald Reagan thought the previous Strategic Arms Limitation Talks (SALT) II had actually weakened the U.S. strategic arsenal while allowing the Soviet Union to modernize their land-based Intercontinental Ballistic Missiles (ICBM). He based this belief on the facts that the U.S. had allowed its nuclear arsenal to age while the Soviets were deploying modern ICBMs and excessively large numbers of delivery vehicles.[2] As a result, his approach to arms control was vastly different from that of his predecessors. Implying that previous arms control initiatives had failed because strategic arsenals had actually grown larger over time, Reagan indicated in the spring 1982 that reductions now in the strategic inventory were required to move toward greater stability. As a matter of fact, adding the Soviet Union and the U.S. nuclear arsenals together, the world was now looking at a combined nuclear arsenal of over 20,000 warheads. Both countries had developed strategies and doctrine that would employ thousands of these nuclear weapons in the event of actual military conflict. Reagan's rationale for stability was that by reducing the numbers of these nuclear weapons in an equal and verifiable manner, strategies and force structure would change and so would reliance on nuclear weapons to wage war. Therefore, the U.S. position in arms control philosophy moved from one of

limitation to one of reduction and the new set of talks that began in June 1982 were dubbed the Strategic Arms Reduction Talks.

START does make a valuable contribution to overall U.S. and Soviet arms control initiatives. Although not yet completed, by viewing START from it's inception, much can be learned about the arms control process. This study examines the START negotiations and treaty as a microcosm of the arms control process. It identifies factors that affect this process, benefits that accrue from the negotiations and inherent pitfalls associated with START and other arms control treaties. Finally, the study addresses potential outcomes for START negotiations and its possible effect on the arms control process.

Goals and Purpose of Arms Control

One of the primary reasons we pursue arms control agreements is because they are a central strategy in improving and achieving strategic stability. President George Bush articulated one of our most enduring national interests, survival of the United States as a free and independent nation, in his statement of the National Security Strategy of the United States dated March 1990. In protecting this interest, we seek several national

objectives, one of which is to improve strategic stability by pursuing equitable and verifiable arms control agreements and modernizing our strategic deterrent.[3] Secretary of Defense Cheney earlier amplified upon this strategy in his January 1990 Report to Congress when he stated that our defense policy concerning arms control was built upon a national security objective which says in part . . . "U.S. engages in arms control . . . to reduce military threats to U.S. and allied interests, to inject greater predictability into military relationships and channel force postures in more stabilizing directions.[4] Logically then, one of the primary goals of arms control that is derived from this national security objective is to impose mutual and planned specific weapons reduction, such as we have in START, which enhance military predictability concerning enemy capabilities. This enhanced predictability and resulting confidence improve stability at reduced levels of potential nuclear confrontation.

The Treaty Framework

The objectives of the START agreement as outlined by its Chief Negotiator, Ambassador Richard Burt, are threefold:

a. It enhances our overall strategic stability and thus reduceds the risk of nuclear war because it reduces the

incentive to use vulnerable nuclear weapons first in a crisis.

b. It enhances predictability in the overall strategic relationship.

c. Because of a comprehensive and intrusive on-site inspection and verification system, it enhances transparency and builds confidences(author's note: probably the most significant aspect of the treaty).5

Since 29 June 1982 until the present, a series of complex negotiations personally involving Presidents Reagan, Bush and Gorbachev and the U.S. and Soviet START negotiating teams have drawn up what is considered today the generally agreed framework for START.

The treaty calls for both sides to reduce their strategic nuclear weapons by 50%; to a ceiling of no more than 1600 strategic nuclear delivery vehicles (SNDV), which include intercontinental ballistic missiles (ICBM), submarine-launched ballistic missiles (SLBM) and heavy bombers; and to a ceiling of no more than 6,000 strategic warheads; over a seven year period.

Within the 6,000 warhead ceiling, additional constraints in the form of sublimits have been imposed: no more than 4900 ballistic missile warheads (BMW) deployed on ICBMs and SLBMs; and of those 4900 BMW, no more than 1540 warheads may be deployed on heavy ICBMs (only applies to Soviet SS-18) and no more than 1100 warheads may be deployed

on mobile ICBMs.[6]

Special counting rules governing heavy bombers were written into the treaty. A bomber equipped with short-range attack missiles (SRAM) or gravity bombs would be counted as one SNDV and one warhead no matter how many missiles it carried. However, if the bomber carried Air-Launched Cruise Missiles (ALCM), each one of these missiles is counted as a warhead.

Sea-launched cruise missiles (SLCM) will not be counted against the treaty limit of 6,000 warheads or 1600 SNDVs.

Lastly, a comprehensive and extremely intrusive verification regime has been established to monitor compliance. The verification protocol consists of data exchange, a series and combination of deliberate and short-notice inspections, continuous on-site monitoring and measures to enhance monitoring of treaty limited items by National Technical Means.

Several observations may be made concerning the framework of this treaty:

a. The proposed 50% reduction in strategic nuclear weapons will certainly not be achieved as a result of special rules and exemptions of selected weapon systems. However, a 50% reduction in Soviet ICBMs and heavy ICBMs, SS-18, is achieved; whereas only a 35% reduction in U.S. ICBMs is accomplished.

b. The counting rules appear to especially favor the U.S. bomber fleet and are very restrictive to the Soviet ICBM fleet which makes up a large part of their force. Bombers carrying SRAMs and gravity bombs can carry many warheads and only be counted as one but are more stabilizing because they are slow and can be recalled.

c. Sea-launched cruise missiles are not included within the treaty because they are not considered strategic weapons systems and the verification complexity would be multiplied by several fold.

d. There is no sublimit imposed on SLBM warheads which make up a significant percentage of the U.S. ballistic missiles.

From the U.S. negotiators point of view, the START accord fulfills its objectives. It substantially reduces large numbers of ballistic missiles which are believed to be more destabilizing than bombers or cruise missiles. These land-based ballistic missiles are destabilizing because they are vulnerable to a first strike and therefore must be used or lost during conflict. In fact, the treaty reduces the U.S. total of 7474 ballistic missiles to 4900 and the Soviet total of 10182 to 4896. Stability is enhanced through reliance on more stable and less vulnerable SDNV, such as heavy bombers and submarines respectively. The Soviet SS-18 is considered by the U.S. administration to be highly destabilizing because its accuracy and throw weight put our

our ICBM land force at risk. Therefore, reduction of that weapon system was an essential U.S. negotiating objective, and ultimately was included in the treaty. Lastly, the proposed complex and comprehensive verification regime appears to continuously monitor compliance, enhances transparency and builds confidence.

History and Political Nature of START

The evolution of an arms control treaty, in particular START, is heavily influenced by both the bilateral attitudes and relationships between the superpowers and the impact the superpowers have on world events.

It took a new U.S. president in 1981 to boldly initiate the novel idea of a treaty that reduces strategic weapons vs the previous two and one-half decades of treaties limiting strategic weapons. Although President Reagan made the offer in December 1981 to begin negotiations on the reduction of strategic forces, the Reagan administration was unwilling to do so. The reason behind this apparent paradox was the existence of two opposing camps of arms control philosophy. Some in the administration, President Reagan and Secretary of State Haig among them, believed that the Soviet Union "built up a definite margin of superiority" over time while the U.S. strategic force aged. They perceived a threat to U.S. missiles in that the Soviets had acquired a distinct advantage in throw-weight and over-reliance on heavy,

land-based missiles. This camp was against arms control until strategic force parity was achieved and therefore pushed for further accumulation of modern, strategic nuclear delivery vehicles and weapon systems. The opposing camp, pro arms control, one of whose champions was Paul Warnke, former director of the U.S. Arms Control and Disarmament Agency, argued for a freeze on building nuclear weapons because, in fact, the Soviets had no margin of superiority and the U.S. had adequate retaliatory forces to deter nuclear war. The freeze proponents had the advantage of overwhelming American public support because of the growing worldwide fear of the risk of adding to the nuclear arms race and to the military rhetoric of limited nuclear war being feasible and winnable.[7] As a result, no progress was made with START talks until pressure from Congress persuaded the administration to resume negotiations which were resumed in the spring of 1982.[8]

Since the opening of talks, however, with few exceptions, it does appear that slow but steady progress has been made in resolving differences and in reaching consensus. Only once, in November 1983, were the talks in jeopardy. The Soviets walked out of the INF talks in November 1983 when it was announced that the U.S. would deploy the Pershing II missile and ground-launched cruise missiles. Then, in December 1983, the Soviets declined to set a resumption date for the START talks, indicating that

the Pershing deployment "undermined the basis for negotiation on strategic weapons."[9] Since the deployment of the Pershing II missiles put the Soviet heartland at immediate risk and the Soviet SS-20 did not place the U.S. at risk, the Soviets felt that the strategic balance had changed in favor of the U.S. The author contends that there were other elements as significant as strategic balance which forced the Soviets to walk out of the INF talks and cancel START negotiations. President Reagan's increasingly hostile anti-Soviet rhetoric, calling the Soviet empire the "root of all evil," and a Soviet general feeling of political distrust of Reagan and the U.S. administration fanned the Soviet fire of suspicion and paranoia. The Soviets may have perceived Reagan as using arms negotiations for propaganda against the Soviet Union and not as serious bargaining, especially when the U.S. was planning to build a new nuclear Midgetman missile. These outward signs and natural Soviet suspicion created a very sour environment for arms control negotiations which resulted in cancellations of two sets of negotiations for 18 months.

But in March 1985, strategic weapons' talks under the guise of the Nuclear and Space Arms Talks were initiated and the Soviets came back to the negotiating table. There is still debate as to whether or not continued deployment of Pershing II missiles in Europe or President Reagan's new Strategic Defensive Initiative (SDI) coaxed the Soviets back

to the negotiating table. I contend that perhaps the Soviets, truly upset with Reagan's SDI program announced in early 1983, saw an opportunity to tie their objections to SDI to the Nuclear and Space Arms Talks. In making this connection, they could now link any strategic arms reduction agreement to space-based weapons, which would severely restrict strategic defensive weapons, the main component of Reagan's SDI program.

Much of the steady progress since then must be attributed to Mikhail Gorbachev and his promulgation of glasnost which ultimately lead to the unification of Germany, a new round of Conventional Forces in Europe talks and the disintegration of the Warsaw Pact. Like Reagan, he altered the long-held Soviet view in strategic talks when he "conceded the validity of the U.S. concerns about the vulnerability of fixed land-based missiles."[10] It was through his initiative that the terms "reasonable sufficiency of forces" and "common security" were introduced and which propelled the concept of arms control to one of the major strategies of his defense policy.[11]

Since Gorbachev's assumption of power six years ago, he has proposed several dozen treaties and has been an open and willing partner to on-site inspections in the Soviet Union.[12] Some of his motivation for this unusual turn-around in Soviet intentions may have been as a result of his need to reduce costly military holdings in order to

channel scarce resources into rebuilding his collapsing economy. Nonetheless, in November 1985, relations between the two superpowers appeared to be warming, with the first of several summits between President Reagan and General Secretary Gorbachev taking place in Geneva. Real progress with START, however, was hindered by disagreement over interpretation of the Anti-ballistic Missile (ABM) Treaty with regard to President Reagan's SDI program. Then in May 1986, the U.S. publicly identified a Soviet violation of the ABM Treaty with the discovery of the construction of a large phased array radar in Krasnoyarsk. This attack on Soviet compliance temporarily soured chances for progress in START negotiations. The second summit between Reagan and Gorbachev in October 1986 produced continued progress but did not resolve the ABM interpretation disagreement.

The signing of the INF Treaty by the two leaders in Washington in December 1987 was a significant step forward in the reduction of an entire class of nuclear delivery systems. I believe that Gorbachev's dynamic leadership and his willingness to deal with the West for his country's benefit, were the keys to a successful conclusion of the INF Treaty. Furthermore, Gorbachev may have sensed that the "timing was right" to conclude the INF accord. He recognized that he could not stop the U.S. SDI program nor bring the U.S. to accept the ABM Treaty. But a successful conclusion of the INF negotiations now, at little cost to

the Soviet Union, would signal his first major foreign policy victory, which he desperately wanted. I think he correctly observed that he might be able to then use this success in influencing his domestic policies or as leverage in future foreign/arms control policy disputes with the West. Lastly, Gorbachev evidently realized that "the value of agreeing to an INF treaty" changed over time and it was now in the Soviet's best interest to sign. Initial deployment of INF missiles by the U.S. was designed for political reasons, to firmly couple the U.S. to defending Europe and enhance deterrence. But, now, removal of those same missiles might "unsettle the alliance and embarass the U.S."[13] Nonetheless, the signing of the INF Treaty signified, more importantly, a breakthrough in more open and honest Soviet-U.S. relations as a result of the verification provisions of that treaty. Joseph Nye tends to support this statement by indicating that arms control is part of a political process. Further, that "the political significance of the INF agreement - the improvement in the U.S.-Soviet relationship in the second half of the Reagan Administration - far outweighed the technical problems related to military doctrine."[14] The June 1988 Moscow summit continued the steady progress in START negotiations but offered no resolution to the SDI interpretation. Subsequently, during the eleventh round of negotiations in the summer of 1989, the Soviets made further concessions,

breaking a logjam that provided an opportunity for a possible signing of START in 1990. The Soviets softened their approach to the ABM Treaty, offered to dismantle the ABM prohibited Krasnoyarsk radar and agreed to keep SLCMs outside of START.

The roller coaster events of the latter part of 1989, beginning with the crumbling of the Berlin Wall to the birth of freedom in Eastern Europe, continued the promising trend of completing START by May 1990. Concessions and agreements by both sides resulted in controls on air-launched and sea-launched cruise missiles. Then, at the June 1990 Summit in Washington D.C., Presidents Gorbachev and Bush, reaching agreement on the central elements of START, further agreed to future negotiations toward a second START without completing the initial accord.

During the Fall 1990, arms control headlines were captured by Conventional Force in Europe (CFE) reductions and START negotiations, once again, receded into the background. In this new era of "the end of the cold war," there was some speculation that arms reduction talks between the U.S. and Soviet Union would fade into the past.[15] The idea behind such speculation centered on the notion that the superpowers would unilaterally disarm for economic, political and, to a lesser degree, military reasons that were quite apart from any success at the various arms control negotiating tables. As 1990 drew to a close, the

grim specter of a possible Gulf War as a result of Iraq's aggression in Kuwait, seized the world's attention and the promised signing of START by December 1990 was again delayed until the February Summit between Gorbachev and Bush.

World events since December 1990, specifically the violent Soviet surpression of the Baltic states, Lithuania in particular, and the outbreak of war in the Gulf, have convinced the superpowers to cancel the February Summit and push the signing of START to June, 1990.

SS-18 Factor

One of the most contentious issues of the negotiations to date has been the U.S. insistence of proposed restrictions on flight testing, modernization, and a 50% reduction and eventual elimination of the Soviet SS-18 heavy ICBM. The primary basis for this insistence has been U.S. fears that this particular Soviet ICBM puts our fixed land-based missile force at risk because it was one of the most accurate and lethal missiles within the Soviet inventory.[16] Additionally, there was concern that this very large Soviet ICBM presented the Soviets with future modernization opportunities. My contention is that this is simply no longer the case and that the treaty should not be delayed over what appears to be artificial and outdated rationale.

Since the beginning of the talks in 1982, U.S.

administrations pushed for sizeable cuts in these Soviet heavy missiles, with no Soviet agreement. Then in 1986, Gorbachev agreed to a 50% reduction in his SS-18 inventory but would not accept the U.S. proposal to stop all flight testing, modernization and production because it would adversely affect future performance and effectiveness of the missile. What the Soviets were attempting to protect was the testing of a new variant of the SS-18, the Mod 5, which was considered more accurate and capable of carrying a larger yield than the older SS-18.[17] This intransigence on the part of the U.S. negotiators concerning flight testing resulted in a three year stalemate in the talks. Finally, in 1989, administration officials realized that even if the SS-18 was eliminated, the Soviets would modernize other ICBMs not covered by START which would threaten our fixed-based missiles and that the Soviets were not willing to change their position. Therefore, the Bush administration softened its approach to some flight testing, 7 over a 3 year period, restraints on modernization and phasing out of SS-18 production in 1992. The Soviets rejected this proposal outright. As of October 1990, the flight testing of the SS-18 is one of the only remaining issues to be negotiated to achieve consensus.[18]

There are several reasons to argue against holding up this treaty until agreement is reached on the SS-18 issue. The first reason is even if we accept the premise that the

SS-18 poses a threat to our land-based missiles, that threat is indeed small. Approximately 20% of our strategic force, 2450 ICBM warheads of a total 12,399 warheads are currently threatened by the SS-18.[19] In the event of a Soviet first strike, a fraction of these ICBMs will be destroyed: but there are still thousands of very survivable warheads in submarines and bombers that act as a deterrent. Therefore, in my judgment, placing our land-based missile force at risk is not a credible argument.

Although a flight testing ban would effectively end modernization as indicated earlier, this issue should not become a treaty-buster. Even if the Soviets end up accepting a restrictive flight testing and modernization ban on the SS-18, they are still free to pursue development, flight testing and modernization of future systems that may possess equal and better capabilities than the SS-18. As former U.S. START negotiator, Max Kampelman, indicated in 1989, "the benefits of a ban on the SS-18 would be short-lived. As the Soviet's accuracies improve, all their ICBMs and eventually all their SLBMs as well can be expected to become hard-target killers." [20]

Finally, it is dangerous to assume that we may be getting something for nothing here by demanding the elimination of a capability without giving up an identical capability. The U.S. does not possess any equivalent land-based heavy missile and therefore the U.S. proposed

limits on the SS-18 appear to be a unilateral Soviet concession. However, the range and characteristics of the new D-5 Trident II submarine-launched ballistic missile, possessing a circular error probable (CEP) of 130 meters[21] (versus the MOD 5 SS-18 CEP of 150 meters[22]) is equivalent to the MOD 5 SS-18 and capable of destroying hardened silos. Therefore, it appears we do possess a similar capability placing an even larger percentage of the Soviet strategic force at risk. If we persist in demanding a ban on flight testing and modernization of the SS-18, the Soviets may refuse to play unless they receive a similar and equal concession, the banning of the D-5.

These continuous artificial and outdated arguments act as obstacles to consensus on the SS-18 issue. The editor of Arms Control Today may have summed it up best when he said:

> "In this context of sweeping change and emerging new priorties, it is simply irresponsible to recommend delaying long-overdue reductions in strategic arms because of an obsession with one missile type, when whatever threat it poses will soon be matched by others. To reject START because it would eliminate only half the Soviet SS-18 force, not all of it, is to make the best the enemy of the good-a habit that arms control critics have long indulged in. With or without restraints on SS-18 flight testing and modernization, a START agreement will serve U.S. security well, cutting the Soviet ballistic missile warhead arsenal in half-including a 50 percent reduction in Soviet heavy missiles-and bringing about the substantial reductions in Soviet missile throwweight that Perle, Nitze, and others have long called for."[23]

Verification

Arms control as a process may fall on its own sword if the U.S. administration can not convince the Senate that the Soviet Union is implementing agreements (START) in good faith. "Adequate and effective verification" which allows the U.S. "to detect a militarily significant" violation and effectively respond is the tool that negotiators build into the treaty that accomplishes this end.[24] As a result of the Intermediate-Range Nuclear Forces (INF) Treaty experiences, the U.S. has designed the most comprehensive and intrusive verification system for monitoring START compliance. Paralleling the INF verification protocol, the proposed START verification regime would consist of a combination of national technical means (NTM), on-site inspections and cooperative measures. But is it enough to detect violations? And even if it is, so what? In examining the Soviet's dismal historical record of suspected and confirmed violations of arms control treaties, one might question the value of ever signing another arms control treaty with the Soviet Union. First, however, a short summary is in order of the unprecedented verification regime that is being proposed to monitor compliance with START.

NTM or reconnaissance satellites will still be the workhorse in monitoring Soviet compliance with START with the main emphasis on tracking deployed ICBMs, SLBMs and

heavy bombers.[25] Imaging by an advanced series of satellites which take pictures at night and through clouds and which electronically transmit digitized imagery in near real time, will identify and keep track of Soviet ICBMs, ballistic missile submarines on the surface and mobile ICBM. Additionally, highly technical Signals Intelligence satellites and large phased array radars will monitor military installations and missile flight tests and will provide detailed data and characteristics on a multitude of missile systems. Our arsenal of technical intelligence collectors has been monitoring Soviet military capabilities for years and will continue to do so long into the future.

Perhaps the most intrusive verification methods to insure Soviet compliance are the proposed five (phases) types of on-site inspections of Soviet missile systems and facilities. On-site inspections will most probably be used on all those systems that can not be verified through NTM. These inspections will verify numerical limits on non-deployed ICBMs and SLBMs, will identify the exact number of warheads within each nose-cone of an ICBM or SLBM, and will identify heavy bombers carrying ALCMs.[26] Prior to commencing inspections, data exchanges on number, locations and characteristics of treaty limited items(TLI) will be conducted.[27] Additionally, both sides will exhibit each type of ICBM, Submarine-Launched Ballistic Missile(SLBM), mobile ICBM and nuclear Air-Launched Cruise Missiles(ALCM)

for the purpose of verification of dimensions. The first on-site inspection or "baseline" inspection will physically verify data previously exchanged at deployment and storage sites and testing facilities for ICBMs, ballistic missile submarines and heavy bombers. Routine inspections, known as short-notice inspections, the heart of on-site inspections, will then follow. Both sides will have the requirement to notify the other of its intention to inspect a site within twenty-four hours. Upon its arrival at a pre-selected entry point, the team will announce exactly which site it will inspect and the host must get the team there within a very short, prescribed amount of time. These short-notice inspections will remain in effect through the life of the treaty. Once reductions and elimination of TLI commences, both sides will be allowed to participate as observers in "elimination inspections." Within the protocols, there may also be a provision to allow a type of short-notice inspection of sites that are suspected of covertly deploying, producing or storing TLI. However, "suspect site inspection" is open to much controversy for fear of allowing Soviets access to our most sensitive sites, and is therefore still being negotiated. Final inspections or "close-out" inspections will be conducted to confirm the elimination of facilities producing or storing TLI and may be conducted more than once.

Cooperative measures refer to those actions taken to facilitate verification such as open displays at selected bases to assist satellite counting of TLI.[28] Additionally, open transmission of all ICBM and SLBM flight testing will be required by both sides to allow for reception by NTM. Limiting the number of warheads on selective ballistic missiles and prohibiting flight testing of any type missile with more than its declared limit are measures specifically built into the treaty which enhance and facilitate verification. Bombers that carry long-range nuclear air-launched cruise missiles will be made structurally different and based separately from conventional ALCM bombers, again, so monitoring by NTM can be conducted.

Besides the provisions outlined above, continuous on-site monitoring using X-rays at ICBM production sites, along with a unique tagging system built into the missiles to discourage covert production, and measures restricting missile basing, movement and deployment are all designed to enhance verification and reduce the incentive to cheat. Continuous on-site monitoring of production facilities to monitor the flow of new missiles into the strategic inventory as older ones are retired may end up as one of the most important elements of the START verification regime.[29] Continuous monitoring assures Congress and the public that the Soviets are in full compliance with the treaty, severely

impedes cheating and acts as a confidence builder between the two sides.

The downside to verification is that no verification regime will insure 100% compliance with START provisions. Difficult issues such as differentiation between nuclear or coventional cruise missiles, verification of counting rules, i.e., the number of Reentry Vehicles (RVs) in a nose cone, and verification of legal non-deployed missiles may still elude negotiators. Even more vexing is the Soviet's ability to suddenly breakout from the limits of the START agreement using stockpiled weapons allowed under START.[30] The Defense Policy Panel estimates that under the current treaty, the Soviets have the capability in a sudden breakout to add 10800 additional weapons to augment the deployed force. The crux of the problem may end up being large Soviet stockpiles of declared, non-deployed missiles not subject to verification. This has forced two prominent U.S. arms control experts to conclude that "No verification provisions can ensure strict compliance when a state deliberately chooses to follow a different course.[31]

Since the U.S. administration's first exposure to Soviet noncompliance and circumvention of arms controls treaties in 1975 with ABM and SALT I, a disturbing and frequent pattern of arms control breaches has emerged. The SS-19 deployment, SA-5 being used in an ABM mode, and numerous other violations of the ABM and SALT I Treaties

were made public.[32] As a result, between public and congressional pressure, the Reagan administration created annual compliance reports in 1984 which put the administration on record regarding Soviet noncompliance.[33] The reports highlighted Soviet transgressions, one of the most notable of which was the large phased-array radar at Krasnoyarsk being constructed in violation of the ABM Treaty. As last year's compliance report reiterated, "The Soviet Union's admission that the Krasnoyarsk radar was "a clear violation" was the direct result of strenuous U.S. objection to this violation and repeated demands for corrective action."[34] Unfortunately, this example of the utility of compliance reports may be the exception and not the norm. Too often the violator, the Soviet Union, ignores U.S. shouts of foul play and counters with compliance charges of their own against the U.S.

Most recently, noncompliance by the Soviets of an unratified CFE and more serious charges concerning the 1988 INF Treaty (SS-23's which were to be totally eliminated, were found in the then GDR) may be one of the key reasons START has been again delayed. Movement of three Soviet rifle divisions to coastal defense (thus, not captured in the CFE accord) and other Soviet forces beyond the Urals before the treaty was signed appear as circumvention to treaty limits.[35] Although not formally linked to START, this Soviet behavior on CFE, which appears to be driven by a

reemerging preeminence of the military, may adversely effect START negotiations.

However, the issue that could condemn the START negotiations to an eventual death, may be the evidence that indicates the Soviet Union did not destroy all the SS-12 Scaleboards and SS-23 ballistic missiles as required under the 1988 INF Treaty but instead sent some SS-12s to Iraq and 24 SS-23s to East Germany, after the Soviets signed the treaty. Discussion of these and other violations is documented in the annual compliance report which the President was supposed to have released to the Congress on 1 December 1990. This annual report has yet to be submitted to the Hill.[36] Bush's delay in releasing this "two-fisted, hard-hitting report of cheating" may have been prompted by his desire not to create additional friction in U.S.-Soviet relations at a time of unrest in the Baltics, coupled with a strong U.S. need for Soviet support in the coalition against Iraq.

Although there may be differences in the nature of verification procedures when the INF protocol is compared to the proposed START protocol, I contend that a key end result, monitoring treaty compliance and building confidence, remain the same. COL John Reppert, a former inspection team chief during the INF Treaty verifications, highlites the fact that the scale of the effort of START verifications is ten times larger than INF; the former

treaty having over 2500 locations and as many as 70,000 TLIs involved. Reppert notes that the START TLI remain around for years and must be tracked, versus the INF TLI which will all be eliminated by June 1991. Finally, Reppert points out that the risk of making an error in START is greater because of the lethality of strategic systems.[37] While the fact that verification of START will obviously be more complex than INF, our readiness and ability to conduct these verifications have certainly been enhanced as well. As a result of the experience and trained manpower the U.S. has gained through three years of a continuous variety of inspections during the INF reductions, the creation of the On-Site Inspection Agency and most importantly the development of hundreds of recurring professional contacts with Soviet scientists/government/military officials, it may be said that we are much more prepared to tackle START than we were for INF.

Conclusion

START does make a valuable contribution to U.S. arms control intiatives, and in fact, those negotiations have mirrored the arms control process.

The U.S. engages in arms control as a part of our national security strategy. GEN Colin Powell, Chairman of the Joint Chiefs of Staff, in a February 1991 statement to the House Appropriations Committee, was more specific saying

that "arms control was a means to an end - that end being providing for our national security."[38] One of the central goals of arms control is mutual and verifiable weapons reductions, producing enhanced military predictability and resulting confidence, thereby improving strategic stability at reduced levels of potential nuclear confrontation. The objectives of START satisfy this key goal of arms control.

In examining the history of the START negotiations, a host of factors have influenced the progress of the negotiations. By far, the superpower leaders, Reagan, Gorbachev and Bush have been the most influential actors in the process. Reagan initiated the treaty; Gorbachev stimulated it and other treaties with his unprecedented openess creating the warmest climate in forty years between the superpowers, and Bush accodmodated the entire process. Other factors playing minor roles were the U.S. Congress and public opinion forcing resumption of stalled talks; the Soviet attitude of suspicion and paranoia which soured negotiations; new weapon systems and policies which alternatively stalled and facilitated talks, i.e., the U.S. Midgetman and SDI and the Soviet SS-18 and glasnost. Even successful negotiation of other arms control treaties i.e., INF, affected START progress by creating a more favorable climate for future negotiations. It can be said that progress in the arms control process is held hostage to the political environment that exists between the superpowers at

the time.

Another related factor, the impact of world events, affected the START negotiations in a pronounced fashion. The disintegration of the Warsaw Pact and crumbling of the Berlin Wall caused a flurry of activity and speedy agreements on previously held contentious issues. However, the resignation of the Soviet Foreign Minister and uprising in the Baltics and Lithuania reversed that progress and caused a postponement in further negotiations.

The obvious benefit of a successfully negotiated START accord is the planned and monitored reduction in specific nuclear weapons, reducing the risk of nuclear war. The implicit benefits of START are the confidence building measures that are born out of an intrusive and comprehensive verification regime. Continuous, active involvement in verification keep both sides talking, which lead to improved relations.

Although verification is wrought with its own set of complex problems, it has become an integral part of current arms control negotiations as it should be. But, as we see in START, verification is indeed a double-edged sword. On the one hand, comprehensive and intrusive verification regimes encourage both sides to establish official and informal relationships and communities, literally in each other's backyard. This familiarity over the long term builds confidence and trust through the daily observation of

the sides' complying with their treaty commitments. Conversely, however, verification monitors compliance and may expose cheating and circumvention to arms control treaties. When this occurs, depending on the seriousness of the breach, the relationship between the superpowers may become seriously strained, trust is dissolved and the treaty and ultimately U.S. national security may be placed in jeopardy.

If the failure to reach a START accord does not signal an end to arms controls, other recent actions by the Soviet Union have already seriously jeapordized the process, if not permanently, then at least temporarily. The violent state of internal social and political unrest within the Soviet Union today and documented evidence of Soviet cheating on recently negotiated, signed and ratified treaties, have already soured the U.S.-Soviet political environment concerning arms control. As the Soviet Union risks potential insurrection or disintegration, all arms control initiatives may be postponed indefinately until the U.S. is certain the government in power continues to stay in power.

We can only begin to be optimistic again when we see indications of a possible resumption of arms control negotiations. This return to the negotiating table, much like a barometer, signals the warming of the relationship between the superpowers, where regional stability is being promoted and confidence in one another is again building.

ENDNOTES

1. Ronald Reagan, Vital Speeches of the Day, pp. 98-101.

2. Arms Control Association, Arms Control and National Security, An Introduction, p. 59.

3. George Bush, National Security Strategy of the United States, p. 2

4. Dick Cheney, Report of the Secretary of Defense to the President and the Congress, January 1990, pp. 2-3.

5. Richard Burt, "Ambassador Richard Burt on the State of START," Arms Control Today, February 1990, pp. 3-8.

6. "Factfile," Arms Control Today, September 1990, pp. 24-25.

7. Paul Warnke, "Do We End The Arms Race", Arms Control Today, May 1982, p. 4.

8. Arms Control Association, Arms Control and National Security, An Introduction, p. 60.

9. Ibid, p. 105.

10. Joseph S. Nye, Jr., "Arms Control After The Cold War," Foreign Affairs, p. 47.

11. Ibid, p. 48.

12. Barry Schneider, "The Year of the Treaty," Defense and Diplomacy, p. 61.

13. Jack Mendelsohn, "Wending Our War to Zero," Arms Control Today, May 1987, p. 9.

14. Nye, p. 44.

15. Richard Burt, "Is START Obsolete?" The Washington Post, November 13, 1990, p. A23.

16. Matthew Bunn, "SS-18 Modernization: The Satan and START," Arms Control Today, July/August 1990, p. 13.

17. Bunn, p. 14.

18. Michael R. Gordon, "Baker Reports Progress on Strategic Arms," The New York Times, 6 October 1990, p. 2.

19. "Factfile," p. 24.

20. Bunn, p. 15.

21. Graham Barral, START, Stability and Arms Control, p. 18.

22. Bunn, p. 17.

23. Ibid.

24. Dunbar Lockwood, "Verifying START: From Satellites to Suspect Sites," Arms Control Today, October 1990, p. 13.

25. James R. Blackwell, "Contributions and Limitations of On-Site Inspections in INF and START," in Arms Control Verification and the New Role of On-Site Inspections, ed. by Lewis A. Dunn and Amy E. Gordon, p. 106.

26. Ibid.

27. Lockwood, p. 13.

28. Ibid, p. 14.

29. Blackwell, p. 118.

30. U.S. Congress, House, Committee on Armed Services, Report of Defense Policy Panel, Breakout, Verification and Force Structure: Dealing with the Full Implications of START, p. 4

31. Ibid, p. 8.

32. Mark Lowenthal, "The Politics of Verification: What's New, What's Not?" The Washington Quarterly, p. 129.

33. Ibid, p. 121.

34. Ibid, p. 130.

35. Mark S. Matthews, "Push For Arms Treaty Stalled by Alleged Soviet Violations of Earlier Pact," The Baltimore Evening Sun, 6 February 1991, p. A2.

36. Rowland Evans and Robert Novak, "Soviet Gulf Games," The Washington Post, 6 February 1991, p. A17.

37. John C. Reppert, COL, USA, On-Site Inspections: Verification in Arms Control: The INF Experience, pp. 37-40.

38. Colin L. Powell, GEN, USA, "Statement before the Sub-Committee on Defense Committee on Appropriations, U.S. House of Representatives, 19 February 1991."

Bibliography

Arms Control Association. Arms Control and National Security, An Introduction. Washington, D.C.: Arms Control Association, 1989.

Barral, Graham. START, Stability and Arms Control. University of Bradford: Peace Research Reports, 1990.

Bunn, Matthew. SS-18 Modernization: The Satan and START". Arms Control Today, July/August 1990, Volume 20, Number 6, pp. 13-17.

Burt, Richard. "Ambassador Richard Burt on the State of START." Arms Control Today, February 1990, Volume 20, Number 2, pp. 3-8.

Burt, Richard. "Is START Obsolete?" The Washington Post. November 13, 1990, p. A23.

Bush, George. National Security Strategy of the United States. The White House, March 1990.

Cheney, Dick. Report of the Secretary of Defense to the President and the Congress, January 1990. Washington, D.C.: U.S. Government Printing Office, 1990.

Dunn, Lewis A. and Amy E. Gordon, Eds. Arms Control Verification & the New Role of On-Site Inspection, Lexington, MA: D.C. Heath & Company, 1990. Pp. 95-119: Chapter 6, "Contributions and Limitations of On-Site Inspections in INF and START," by James R. Blackwell.

Evans, Rowland and Novak, Robert. "Soviet Gulf Games." The Washington Post, 6 February 1991, p. A17.

"Fact File: Potential Strategic Forces Under START." Arms Control Today, September 1990, Volume 20, Number 7, pp. 24-25.

Gordon, Michael R. "Baker Reports Progress on Strategic Arms." The New York Times, 6 October 1990, p. 2.

Lockwood, Dunbar. "Verifying START: From Satellites to Suspect Sites." Arms Control Today, October 1990, Volume 20, Number 8, pp. 13-19.

Lowenthal, Mark M. "The New Politics of Verification: What's New, What's Not? The Washington Quarterly, Winter 1991, Volume 14, Number 1, pp. 119-131.

Matthews, Mark. "Push For Arms Treaty Stalled by Alleged Soviet Violations of Earlier Pact." The Baltimore Evening Sun, 6 February 1991, p. 2A.

Matthews, Mark. "U.S.,Soviets Agree to Pact on Arms Cuts." Baltimore Evening Sun, 3 October 1990, pp. 2-3.

Mendelsohn, Jack. "Wending Our Way to Zero." Arms Control Today, Volume 17, Number 4, May 1987, pp. 4-9.

Nye, Joseph S. Jr. "Arms Control After the Cold War." Foreign Affairs, Winter 1989/90, pp. 42-64.

Owens, MacKubin Thomas Dr. "Force Planning in an Era of Uncertainty." Strategic Review, Spring 1990, pp. 9-21.

Reagan, Ronald. "United States Foreign Affairs Policy. Arms Reduction." Vital Speeches of the Day, December 1, 1981, No. 4, pp. 98-101.

Reppert, John C. COL, USA. On-Site Inspections: Verification in Arms Control: The INF Experience, Harvard University: The John F. Kennedy School of Government, 1989.

Schneider, Barry. "The Year of the Treaty." Defense and Diplomacy, June 1990, pp. 22-24,61-62.

U.S. Congress. House. Committee on Armed Services. Defense Policy Panel. Breakout, Verification and Force Structure: Dealing with the Full Implications of START. 100th Cong. 2d Sess. Washington: U.S. Government Printing Office, 1988.

Warnke, Paul. "Do We End The Arms Race?" Arms Control Today. Volume 12, Number 5, May 1982.