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VERIFICATION OF ARMS CONTROL AGREEMENTS: NEW HOPE IN A NEW ERA

The panel was convened at 8:30 a.m., April 21, 1988, by its Chair, Thomas Graham, Jr.**

REMARKS BY THOMAS GRAHAM, JR.

The panel will provide an overview of the history and future of verification in arms control. Verification is a central subject for arms control policy and negotiations. A viable arms control agreement cannot exist without sound verification provisions and compliance policies that derive from those verification provisions and that are pursued in a sensible way.

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This is a new era with the advent of the INF Treaty.[1] For many years, the United States gradually ground out concessions from the Soviet Union in the area of verification to attempt to balance the advantage the Soviet Union has as a closed society versus the United States—an open society. The United States relied on national technical means (NTM), such as photographic reconnaissance satellites, to verify arms control agreements with the Soviet Union. Although such means are extraordinarily effective, the INF Treaty goes far beyond them. In my opinion, the INF Treaty contains profoundly new verification arrangements that raise hopes for future arms control agreements.

The INF Treaty contains a vast array of onsite inspection arrangements within the Soviet Union and within the United States. The United States has had to create a new agency called the On-Site Inspection Agency (OSIA) to implement the verification provisions in the INF Treaty. This agency within the Department of Defense will have some 400 inspectors and an estimated annual budget of $180 million to $200 million, about seven times the annual budget of ACDA. It is estimated that in the first year after entry into force of the INF Treaty, the OSIA will conduct about 200 inspections within the Soviet Union. Perhaps one aircraft a day will fly into Moscow bringing American inspectors. For the first year of the treaty, about 400 American inspectors will visit around the Soviet Union; about 400 Soviet inspectors will visit around the United States. Forty American inspectors will be permanently stationed around a Soviet plant in the central Soviet Union; forty Soviet inspectors will be stationed around a plant in Utah. Baseline inspections will have to take place between 30–90 days after the INF Treaty enters into force to check all the information and data that each nation has given the other on its systems covered by the INF Treaty. Closeout inspections will have to be made whenever a base is closed to verify the closing. Perimeter portal inspections will have to be conducted by the 40 inspectors stationed in each country. Short notice inspections, designed to make sure that there is no cheating, will have to be conducted. Elimination inspections, inspections of the actual destruction of weapons that must be eliminated under the INF Treaty, also will have to be conducted. Just implementing all these provisions is going to be a major task. Many of us in the United States are hopeful that this will lead to agreements in the future that will increase international stability and reduce the risk of war.

Remarks by Ralph Earle, II*

Verification is vital for two reasons: (1) each party to a treaty must be confident in a substantive way that it can monitor the other party's activities in a fashion that permits it to determine whether that party is complying with the treaty; and (2) each party, and particularly the United States, must be comfortable politically with its ability to verify an arms control agreement. I spent 6½ years negotiating the Strategic Arms Limitation Talks (SALT) II Treaty;[1] then I spent what seemed to be 60½ years negotiating with the U.S. Senate trying to get that treaty ratified. I can assure you that the U.S. Senate was a much more difficult negotiating partner than the Soviet Union.

Verification always has been crucial to the substantive and political viability of any arms control agreement. We could go back to 1963 when President Kennedy signed the Limited Test Ban Treaty that prohibited the testing of nuclear weapons in all

[1] 27 ILM 84 (1988).

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[1] 18 ILM 1112 (1979).

media except underground. History would indicate that the Limited Test Ban Treaty could have been extended to underground testing had each side been confident that it could monitor underground testing. But because the state of seismological technology was such that it would have been difficult to distinguish between chemical explosions and earthquakes on the one hand and nuclear explosions on the other, that treaty did not go that far.

With respect to atmospheric and even exo-atmospheric explosions, it was determined by the United States that it could monitor those through "national technical means." That is a very important phrase and continues to be one in the verification arena. National technical means is a euphemism or a collective phrase for all those scientific methods that the United States and the Soviet Union have to determine what the other side is doing. For example, satellites and other electronic collection equipment, however based, are national technical means.

So it was concluded in 1963 that the United States could not determine whether or not the Soviets were testing in areas other than underground. There even was some criticism at that time that the United States could not verify even atmospheric or exo-atmospheric nuclear testing. For example, it was even advanced that the Soviets might test behind the moon. Such far-fetched scenarios were dismissed, however.

Reliance again was placed on national technical means in the first strategic arms limitation agreements (SALT I), which were signed in 1972. Those agreements were the Anti-Ballistic Missile (ABM) Treaty[2] and the Interim Agreement on Offensive Arms.

Another phrase crept into our jargon during SALT I: "adequate verification." There is no exact definition of adequate verification. Basically it means that the means of verification as applied to the terms of the treaty are adequate to detect cheating or violations of the treaty at a sufficiently early time so that steps can be taken to compensate for the cheating or violations and to ensure that no significant change in the strategic relationship between the United States and the Soviet Union results. The standard of adequate verification was employed by the Nixon, Ford and Carter Administrations. Obviously, any definition of the standard has many subjective elements. For example, the word "adequate" is subjective and so is "sufficiently early time." The Reagan Administration has changed that standard to: "effective verification." In my view that is a distinction without a difference just as changing the name of SALT (strategic arms limitation talks) to START (strategic arms reduction talks) is also a distinction without a difference. Reductions in strategic arms were sought in SALT just as they are being sought in START.

SALT II was negotiated under the aegis of adequate verification, and everything in that treaty is verifiable through national technical means. Bear in mind, though, that what was being limited in SALT I and SALT II were things much easier to monitor than things being limited or eliminated in the INF Treaty and presumably in the prospective START agreement. Fixed intercontinental ballistic missile (ICBM) launchers or silos are huge and require a great deal of concrete to be poured over a couple of years. They are impossible to miss. Similarly, submarine-launched ballistic missile (SLBM) launchers also are virtually impossible to miss, given the time it takes to build a submarine, its size and its visibility. Finally, SALT II included heavy bombers, which are very large airplanes and also quite difficult to conceal.

Even though national technical means are the primary means of verification in SALT II, two things were included in SALT II that are forerunners of provisions in

[2]11 ILM 784 (1972).

the current INF Treaty and the future START agreement. The United States and the Soviet Union agreed in the statement of principles that any future agreement would require "cooperative measures." Although such measures were not defined, they include onsite inspection. In fact, the Standing Consultative Commission (SCC) had already begun to engage in some cooperative measures in order to verify compliance with the SALT II agreement.

The other SALT II forerunner of the INF Treaty verification provisions was the "data base." In SALT I, and before that, the Soviets refused to direct their attention in any agreement to the number of weapons that were being limited. The United States pressed the Soviets very hard in SALT II to include such a data base. U.S. negotiators were helped by a number of Senators who came to Geneva and told the Soviets that they were very much in favor of the SALT agreement but that they would vote against it if there were no agreed data base. One day in one of private negotiating meetings Deputy Foreign Minister Somenov, the chief of the Soviet delegation, reached into his pocket and pulled out a paper and without any preamble read: "The Soviet Union has 156 heavy bombers." Then there was a pause, and he said: "I've just violated 700 years of Russian tradition." Gradually the United States managed to get the rest of the information for an agreed-upon data base that has been magnified and amplified in the Memorandum of Understanding[3] to the INF Treaty.

Verification you will hear about constantly. It is important for the substance and the confidence in the treaty, and for the treaty's political life. But I also recommend that when you hear complaints about a treaty's verification provisions that you think about them quite carefully. No treaty is 100-percent verifiable. If you accept the definition of adequate verification or effective verification, it does not have to be 100-percent verifiable. To paraphrase Samuel Johnson, verification is the last refuge of a scoundrel. If someone wants to attack a treaty, he or she always can attack it on the basis that it is not 100-percent verifiable. Make sure that those people attacking a treaty on that basis also believe and can convince you that the treaty is not adequately verifiable or effectively verifiable, because those are the appropriate tests.

Remarks by Sidney Graybeal*

I will focus on the SCC and other implementing bodies. I agree with Mr. Earle that it is extremely important to recognize that arms control is one means of achieving U.S. national security objectives such as strategic stability. Arms control is not an end in and of itself. It never has been and never should be. Unfortunately, arms control has become such a focus of public attention that many people get the impression that it has become an end in and of itself, which has had a detrimental effect on the arms control process.

Similarly, verification has taken a role in and of itself within the arms control process. The United States never has based an arms control agreement on trust and it never should. There must be "adequate" or "effective" verification, but it is difficult to determine what constitutes adequate or effective verification. "Adequacy" or "effectiveness" are very much in the eyes of the beholder. For example, the ability to detect surreptitious construction of 10 ICBMs per year may not be worrisome in a treaty regime where each party is limited to 1000 ICBMs, but it very well may be worrisome

[3]27 ILM 84, 98 (1988).

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in a regime in which each side is limited to 100 ICBMs. There are many factors that go into this judgment concerning what constitutes adequate or effective verification.

The critical criterion should be military rather than political significance. "Military significance" was defined by Harold Brown in SALT II and by Paul H. Nitze and others in the current INF and START negotiations. It is the ability to detect and identify Soviet actions of sufficient importance that could jeopardize U.S. security in sufficient time to respond appropriately. Unfortunately, arms control agreements are essentially political instruments and as such any violation regardless of its military significance takes on major proportions. You have to keep that in mind when you look at verification. Americans operate on the basis that if someone cheats a little he will cheat a lot. As Mr. Earle pointed out, however, no verification regime is 100-percent foolproof. There is no such thing as perfect verification. Any arms control verification regime should be tailored to meet U.S. security requirements.

I will turn now to a discussion of the concept and origin of the SCC. Early in the SALT I negotiations both sides recognized that there would be a need for an implementing body. There were no problems in negotiating article XIII of the ABM Treaty, which calls for the establishment of the SCC. The SCC was established in the fall of 1972 when its charter was signed. Its first meeting took place in the spring of 1973, and it has been an effective operating body ever since.

I want to emphasize what the SCC is and what it is not. The SCC is essentially an implementing body, although its charter permits it to modify existing agreements or negotiate new agreements as appropriate. That permission was granted because it was anticipated that a final agreement concerning offensive armaments would be completed, in which case there would be no ongoing negotiation in the strategic area, and such a body would be needed to account for changes. So its charter is very broad.

As an implementing body it performs four types of functions. First, it negotiated the dismantling or destruction procedures called for by the ABM Treaty and the Interim Agreement with respect to strategic arms. Very precise agreements were completed by the SCC for dismantling submarines, ICBM soft-launchers, ICBM silo-launchers, ABM radars and launch pads. All these agreements were signed and are binding equally on the Soviets and the United States. They were and remain classified, primarily because they contain details of weapons systems and also because the Soviets requested that they remain secret.

The second area that the SCC has dealt with involved ambiguities or compliance issues. This area has been one of the more controversial of its activities. During my tenure as the first Commissioner of the SCC from 1973–77 there were ongoing SALT II negotiations. There was an incentive on the part of the United States and the Soviet Union to resolve ambiguities on compliance issues. Several were raised by the United States, and some similar issues were raised by the Soviets.

The Soviets have a great knack for keeping the scorecard even. They try to do it by finding an issue that is comparable in nature to facilitate bargaining. I personally have a strong objection to the Soviet approach of linking one compliance issue with another. I think each compliance issue should be dealt with on its own merits. Linkage starts down a slippery slope where each party engages in a little cheating to match the other party. This is not conducive to effective arms control.

During my tenure as Commissioner, the United States raised a number of issues, and the Soviets raised a similar number of issues, all of which were discussed in private, not in public. Some of these issues were, in my view, of critical importance to U.S. security. Some were nuisance items. There were some issues that could have major military significance, such as our concern over the testing of an SA-5, a surface-

to-air missile (SAM), radar in an ABM mode. The reason such an issue was critical is that there are 2,000 SAM radars and about 10,000 SAMs in the Soviet Union, and if the Soviets could upgrade these to give them an ABM capability, that would undermine the ABM Treaty. After getting its facts straight, the United States pointed this out to the Soviets. I should emphasize that a compliance issue or ambiguity should not be raised until the party raising the issue has its intelligence facts correct. It took the United States about 12 months to get the facts on this situation. I also should emphasize that an issue should be raised only when it will not compromise sensitive intelligence sources or methods. Such a determination is the responsibility of the Director of Central Intelligence (DCI). The issue of SA-5 radar testing was raised, and the Soviets ceased the activity in a very short period of time.

I mentioned that during this period, 1973–79, SALT II negotiations were taking place so that the environment was conducive to clarifying and removing ambiguities. When the Reagan Administration came in critical of SALT I and II and labeling the Soviets liars and cheats, the compliance issues were forced out into the open. The SCC was not able to deal effectively with the accusations of the Reagan Administration. Once the debate over compliance becomes public, it is difficult to deescalate it so that the issues can be clarified or resolved effectively in the SCC.

The third area of SCC activities involves clarifications of existing agreements. For example, when the SA-5 radar issue arose, it was not clear whether that radar was being used for the type of range instrumentation that would permit the system to be upgraded into an ABM system prohibited by the ABM Treaty. The SCC dealt with this and some related issues over a period of about two years and came up with what is known as "The 1978 Agreed Statement," that clarifies the use and the role that such radars can perform at ABM test ranges. That statement was classified at the request of the Soviets and remains so.

I regard it as a major mistake on the part of past and present administrations to keep that statement and other implementing agreements classified. It also would be a mistake to classify any future agreement that clarifies the purpose of a treaty. When a treaty, like the ABM Treaty, is unclassified, any clarifications of its meaning should be unclassified also so that the public can understand the treaty fully. A ratified treaty is after all the law of the land.

The fourth area of SCC responsibility, which is little known, is implementation of the Accidents Measures Agreement (AMA).[1] The AMA was negotiated in parallel with SALT I. It was submitted and ratified in 1971 and basically is intended to reduce the likelihood of an accidental nuclear war. The AMA has certain procedures that can reduce uncertainties and prevent misunderstandings, and the SCC has implemented the agreement effectively.

Having covered these four areas of responsibility, I now wish to deal with the question of what course can be taken after noncompliance is discovered. First, efforts can be made to induce compliance within the framework of the treaty. Effective responses to noncompliance often require elevating the issue to higher levels in the U.S. Government that can deal directly with corresponding levels in the Soviet Government. If elevating the issue is unsuccessful, the issue can be made public with emphasis on its military significance. Military significance, for example, may be the potential for "breakout" from the treaty. I think it is very interesting that compliance reports issued by the Reagan Administration lack any real assessment of the military significance of compliance issues.

[1] 10 ILM 1173 (1971).

If noncompliance cannot be resolved within an implementing body such as the SCC, there are several other steps that can be taken. For example, a country can withdraw from the treaty. Every treaty has a withdrawal clause, and if noncompliance is sufficiently serious, then withdrawal should be considered seriously. If it is time urgent, a country can abrogate the treaty. Or a country can match the noncompliance with a measured response. Finally, as an extreme measure, a country can go to war. So there is a whole series of actions that can be taken in this area. It has been extremely difficult for any administration to focus on this issue of how to respond to noncompliance. Other than a 1961 article in *Foreign Affairs* by Fred C. Iklé, it has been a difficult issue for people in and out of the government to focus on. I suggest that it is something to which the legal community really ought to give more attention.

I pointed out that the SCC is strictly a tool of the U.S. and Soviet Governments. Consequently, when the SCC is criticized it should be remembered that its effectiveness depends directly on the relationships between those governments and on the instructions they provide the SCC commissioners to implement. A commissioner's flexibility as a negotiator is strictly limited to tactics, although he does participate in the preparation of his instructions. U.S. commissioners cannot deviate from their instructions without the consent of policymakers in Washington.

An apt analogy is that of the golfer. Golfers are suckers for new equipment. Without hesitation a golfer will go out and buy a $300 driver because it may add 20 yards to his shots. Now, if a golfer with such a new driver hits his first ball into the lake on the right and his second ball into the woods on the left, he is apt to curse that driver and wrap it around the nearest tree. It is just possible, however, that the golfer holding the driver might be at fault, not the driver. Similarly, I think it is possible that the two governments holding the SCC may be at fault, not the SCC, when there are problems resolving some compliance issues. Thus I think that much of the criticism of the SCC is completely undeserved. For example, the current SCC commissioner, Lt. Gen. Richard H. Ellis (Ret.), has done and is doing an outstanding job but is not being given proper credit for his activities.

I also want to discuss briefly the reasons why the SCC will not be employed under the INF Treaty, even though there is a requirement for such a body, and even though the SCC has proven its utility and effectiveness over the years. First, the ABM Treaty has been criticized by some as a mistake. The SCC is a creature of the ABM Treaty. Therefore, there is little incentive on the part of these critics to make the SCC an effective body because it is so closely associated with the ABM Treaty, so a new special verification commission will be formed under the INF Treaty, even though its charter will be almost identical to the SCC's charter. Second, the SCC has been criticized because allegedly it only meets irregularly and cannot meet at any time merely by giving notice. That allegation is incorrect. The SCC's charter permits it to meet any time with a short notice, and the United States has called special sessions and the Soviets have appeared. It is a mistake to set up an independent body for each bilateral strategic arms control agreement that is negotiated. A single body facilitates the accumulation of experience. That experience should be amassed rather than dissipated.

I also would suggest that there is a strong need for an interagency body to coordinate the many functions that the INF Treaty will bring into being. There are four independent operations that should be coordinated: (1) the Special Verification Commission to be created; (2) the Nuclear Risk Reduction Center in the State Department, which is going to be the focal point for handling all notifications under the INF Treaty; (3) the On-Site Inspection Agency, to which Mr. Graham referred; and (4) and the ongoing intelligence community activity that continuously puts out highly

classified monitoring reports that evaluate Soviet actions concerning each provision of an arms control agreement. It appears to me that there is significant overlap between these four bodies; thus, there is a need to assure coordination among them.

REMARKS BY MICHAEL H. MOBBS*

I have been asked to share with you my personal thoughts on how the Reagan Administration has handled verification and compliance. I think that the Reagan Administration should be credited with some very large achievements in the field of verification and compliance. I also think it should be credited with some very large failures. First I will talk about the achievements.

The administration has raised the level of public attention to the importance of verification and compliance far beyond any prior administration. It also has raised the quality of the debate on these issues. By holding out for effective verification as one of its central and prominent negotiating objectives, the administration has sparked thoughtful discussion across the spectrum of domestic and alliance political thought on the difficult question of what is "effective verification" or, if you wish, "adequate verification," and when does its absence argue against seeking potentially useful constraints that would be unverifiable or, for that matter, argue against any agreement at all?

By documenting and publicizing Soviet treaty violations after reasonable pursuit of remedies through confidential diplomacy, instead of sweeping them under the rug, the administration has introduced a healthy dose of realism into the practice of arms control. Arms control politics and policies all too often have embraced the related myths that agreements are good in themselves, because they reduce international tensions or prevent wars, and that no nation would cheat because the outrage of world opinion would make the cost too high if found out. Soviet violations of the SALT agreements and other arms control accords have exploded these myths. Treaty violations have caused more tensions than the lack of treaties. This is so because any deliberate violation, whether or not "militarily significant," is a jarring event that calls into question whether the treaty is still in the mutual interests of the parties.

World opinion, to the extent it cares or even exists, tends to dismiss Soviet violations as unproven or unimportant. But it regards even a suggestion of responsive U.S. noncompliance as unconscionable. Even so, the Reagan Administration's emphasis on the unacceptability of Soviet cheating has brought back into focus the obvious but often overlooked points that arms control treaties are not self-enforcing, that a sovereign nation may have interests that, by its lights, are more important than complying with arms control agreements, that treaty violations cannot be resolved through discourse where the parties' positions and objectives are diametrically opposed, and there is still no good answer to the question Fred Iklé asked in *Foreign Affairs* more than 25 years ago: "After detection—What?"[1]

Through persistent negotiating stands, the administration has achieved an unprecedented set of monitoring and verification provisions in the INF Treaty, both in terms of onsite access to Soviet military facilities and in terms of the detail and specificity of the treaty. But it must be admitted that the results are so impressive in part because the verification provisions of previous arms control accords have been so unimpressive. It must also be admitted that the administration could not have done it without the "Gorbasm" of glasnost going on in the Soviet Union.

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[1]39 FOREIGN AFF. 208 (1961).

I disagree with critics who say that the administration has emphasized verification and compliance in order to create artificial obstacles to reaching new arms control agreements. Such emphasis in the end proved no obstacle to concluding the INF Treaty, and I dare say it will not prevent a START agreement if the other issues of substance can be resolved in that negotiation. The administration's maxim that "to be serious about arms control is to be serious about compliance" always struck me as one of those indisputable points of logic that would be remarkable in commercial negotiations only if anyone thought it necessary to voice it, but in the far different political exercise of arms control, it is considered remarkable by some only because the President dared to say it.

In one respect the Reagan Administration holds the most remarkable record of fealty to agreements in the history of arms control, if not the entire history of treaty relations among nations. It kept the United States in observance of one agreement until nearly nine years after the agreement had ceased to be in force. And until the administration's sixth year, it kept the United States in observance of another agreement that never had had the force of law, that if it had entered into force would have expired nearly six months before the Reagan Administration stopped observing it as a matter of policy, and that the Soviet Union had materially breached in several respects well before the administration finally acted. I refer of course to the SALT I agreement, which expired in October 1977, and the unratified SALT II Treaty, which if ratified would have expired in December 1985.

The President's decision in May 1986 to cease unilateral U.S. observance of SALT I and SALT II was politically courageous and was in the nation's best interests for at least two reasons. First, it freed the nation to retain certain strategic military forces that still had useful life and that otherwise would have had to be retired because of SALT limits, and enhanced our force flexibility for important conventional as well as nuclear missions. Second, and to me at least as important, it demonstrated to the Soviet Union that the United States was capable of taking decisive action in the face of prior Soviet breaches the cure of which we repeatedly sought to no avail.

This decision was in fact the only decisive action in response to Soviet noncompliance that the administration can claim. In no other instance has the administration managed even to identify potential responses that all responsible civilian and military officials have been willing to recommend to the President. And even the May 1986 decision was rendered a largely empty gesture by subsequent congressional restrictions on the President's power to deploy forces exceeding the SALT numerical limits.

This brings me to what I see as the Reagan Administration's chief failures. Its biggest failure is that it has no compliance policy. That is to say, it has no policy on what to do about Soviet treaty violations. There is not a single administration spokesman who, if pressed to state the administration's policy on how to respond to Soviet violations, would be able to say anything more than: "The United States will vigorously protest through diplomatic and other appropriate channels in an effort to persuade the Soviets to alter their behavior, and the United States will consider other appropriate actions as necessary," or words to that effect. Of course, this is not a policy. It is little more than a description of what the bureaucracy does naturally when there is no policy. To the best of my knowledge, there exists no central guidance in the form of a presidential directive or the like that lays out what the nation's overall objectives are or should be in dealing with Soviet violations, how the nation should go about seeking Soviet voluntary corrective action, what the nation should do in the absence of such corrective action, or even what generic courses of action should be considered, such as temporary suspension of the agreement, partial abrogation, tem-

porary suspension of selected provisions, unilateral actions in areas not limited by the agreement, and so forth.

I am the first to admit that I am just as responsible for this failure as any other present or former official who has been in a position to influence the administration's policies. While in the government I did spend some considerable time trying to outline just the sort of policy the lack of which I criticize. It is a daunting task for several reasons. I will mention three.

First, it is very difficult even for an administration skeptical of Soviet behavior and intentions to form a consensus on whether or not the Soviets have cheated in any particular case. Because of our American legal and cultural heritage we consciously or unconsciously impose on ourselves a very high standard of proof, failing which we are typically reluctant to level charges of treaty violations. This is probably also due in part to the fact that there is no court or other such forum where the charges can be adjudicated. Hence, the act of making the charge and the act of proving it to some extent become one and the same thing, or at least are very intertwined. Added to this is the problem that the evidence is seldom free of ambiguity and is usually subject to more than one interpretation, though not necessarily more than one reasonable interpretation. The inevitable result is that there are usually differences of view within the administration over whether there has been a violation, the nature of the violation, and how serious a threat it may be to U.S. interests.

Second, even if a consensus can be formed that a violation has occurred, it is hard to get a consensus on what to do about it, if anything. Yet that consensus is crucial, not only within the administration but also between the executive and congressional branches. No policy, however cleverly crafted, can work without such a consensus.

Third, even if there is a consensus that a violation has occurred and that a certain generic response is in order (such as partial abrogation of the treaty) how to frame and implement that response is likely to be hotly debated within the administration, between the administration and the Congress, within the North Atlantic Treaty Organization (NATO), and in the news media.

Moreover, almost any response will entail costs as well as benefits. The costs may be political, and they most assuredly will be financial. This point is most obvious in the case of a response in the form of military force developments or deployments that the treaty had barred, and that would not have been pursued except for the prior Soviet violation.

Another major failure is that, to the limited extent the administration has tried to articulate a compliance policy, it has abandoned the one clear principle that bore some resemblance to a policy. I refer to the principle that the United States would not enter into any new arms control agreements with the Soviet Union until the Soviets first cured their noncompliance with existing agreements. As recently as the March 10, 1987, report to the Congress on Soviet noncompliance with arms control agreements, the President reiterated that "compliance with past arms control agreements is an essential prerequisite for future arms control agreements. . . . Strict compliance with all provisions of arms control agreements is fundamental, and this Administration will not accept anything less." This unambiguous and, in my view, sound policy proved no match for the allure of an INF Treaty. As soon as that treaty was signed, this policy was unceremoniously dumped down the proverbial Orwellian memory hole without explanation or apology. It is little wonder that such a matter as the Krasnoyarsk radar, perhaps the most universally acknowledged breach of an arms control treaty since the *Graf Spee* put to sea, commands little more attention today than that earlier violation does.

Another failure is that the Reagan Administration has not been faithful to its own negotiating objective that any arms control treaty must be effectively verifiable. I do not refer here only to the various shortcomings of the INF Treaty's verification provisions that make it less verifiable than it might have been. I mainly have in mind a more fundamental point: in its zeal to achieve militarily or politically significant treaty limits, the administration variously has proposed or accepted certain limits on military activities or capabilities that are inherently unverifiable to any reasonable level of confidence. Some examples might include range limits on cruise missiles in the INF Treaty, limits on covert weapons production or storage in the INF Treaty and START, the attempt to draw a verifiable distinction between nuclear-armed and conventionally armed cruise missiles in START, numerical limits on mobile ICBMs in START, and actual (*i.e.* operationally deployed) warhead counts in START. Some of these limits, if honored by the Soviets, might well serve U.S. interests. That is not my point. My point is that the administration has sometimes been too quick to advance proposals that were in essence unverifiable, but that could perhaps be made somewhat less unverifiable by elaborate, intrusive verification procedures.

In the world of politics, unlike the world of law, it is rather easy to dispense with logic and to assert that intrusive inspection procedures would make unverifiable limits somewhat less so; thus, intrusiveness is necessary to achieve effective verification, and thus, if one achieves intrusiveness, one also will have achieved an effectively verifiable treaty. The correct flow of logic is that certain treaty limits may in themselves be good if honored but are not really verifiable, that without certain intrusive inspection measures such a treaty will certainly not be effectively verifiable, but that even with such intrusive measures, the treaty will probably not be effectively verifiable. This being so, the only responsible course is to weigh the likely benefits of the intrusive inspection procedures against their likely costs.

Take for example the U.S. proposal in START to allow short-notice nonroutine inspections, at locations ostensibly unrelated to treaty-limited activities, but where one party suspects that the other may be violating the treaty covertly. The purpose of such a measure from the U.S. point of view would be to deter Soviet cheating. No one really thinks that the Soviets actually would let the United States see them in flagrante delicto, but maybe the United States could make it harder for them to conduct covert production or the like and thus discourage such behavior. Against this possible benefit stands the risk of harm to vital U.S. security interests. The United States has to let the Soviets have the same rights as the United States has, after all. Does the United States really want Soviet inspectors prowling, on demand, in some of this nation's most sensitive and secret military and industrial facilities?

It is rightly hard to keep government secrets in our free and democratic society. But even in out society we have carved out some limited areas where we allow, indeed we require, our government to conduct certain activities that are vital to the defense of our nation in the utmost secrecy. Some of these activities, by the way, relate directly to our efforts to maintain and improve the nation's ability to monitor arms control treaties. There may be substantial risk that some of these activities would be irreparably compromised if Soviet inspectors had access to the places where they are conducted. And the only benefit would be some possible but wholly undeterminable deterrence against Soviet cheating.

If this analysis proves to be correct, then the conclusion should not be that we go forward with the treaty and leave out suspect-site inspection. The better conclusion should be that we reevaluate whether the particular treaty limit, or the treaty as a whole, is worth pursuing. If the Reagan Administration adopts this approach, it is

much more likely to have a just claim that any START treaty presented to the Senate will be effectively verifiable. If the INF Treaty is to be the example, however, I would not be surprised if the administration ultimately settles for less verification than it says it must have, but nevertheless asserts that it got all it needed.

REMARKS BY THOMAS GRAHAM, JR.

I will discuss the future of arms control verification and particularly the impact that the INF Treaty might have on the START negotiations. As a side comment about the fact that this administration has gone to great lengths to observe arms control agreements even when it was not obligated to, I might mention first a remark that I heard at the very beginning of the Reagan Administration. I was involved in a discussion in 1981 among various officials in ACDA and in other agencies about the question of what to do about the MX missile. The issue was whether the missiles should be placed in superhard silos, and whether or not superhardening such silos would breach the SALT II Treaty. I said I did not think it would be a problem because this would not happen until 1986 and SALT II would expire by that time. A senior official seated across the table from me sort of raised his hand, and I said: "I am sorry, in 1986 it would have expired had it been ratified." He said: "No, no, that is not why I raised my hand. I just wanted to comment that probably SALT II will be with us forever. As the French say, 'nothing is so permanent as the provisional.' " So it was an interesting turn of events that these two agreements were observed informally for so long. There are two other unratified treaties[1] that we still are observing informally, which were sent to the Senate in 1974 and 1976, which limit underground nuclear testing to 150 kilotons. Those two are being observed still pursuant to informal statements exchanged in 1976.

I will turn now to some of the INF provisions concerning verification that undoubtedly will be taken as models for any START Treaty. A vast array of inspections will take place under the INF Treaty. First, there are the baseline inspections, which are onsite inspections on the territories of the parties and on the territories of basing countries, including West European countries where U.S. weapons systems are located and East European countries where Soviet systems are located. The purpose of the baseline inspections is to confirm the data exchanged pursuant to the signing of the treaty. These begin 30 days after entry into force of the INF Treaty and must be completed in 90 days. They cover all missile operating bases and deployment areas, missile support facilities and elimination facilities listed in the Memorandum of Understanding of the treaty.

Second, there will be closeout or suspect-site inspections. The right to inspect the suspect sites lasts for 13 years, although the INF Treaty is a treaty of indefinite duration. The first three years will be closeout inspections concerned with the elimination of the INF systems, and the 10 years afterwards will concern verifying treaty limits. Each party can have 20 of these inspections per year for three years, 15 per year for the next 5 years and 10 per year for the last 5 years of the 13-year period. They begin 90 days after entry into force. Under the suspect-site provision, current and former missile operating bases and missile support facilities can be inspected.

Third, there will be the continuing on-site inspections. One production plant in the Soviet Union and one production plant in the United States will have perimeter portal monitoring and permanent stationing of inspectors. The reason for this is that the plant in the Soviet Union that is the final assembly facility for the SS-25 missile, a

[1] 13 ILM 906 (1974), 15 ILM 891 (1976).

strategic missile to be covered by the START Treaty, is also the final assembly plant for the SS-20 missile, which is limited by the INF Treaty. It just so happens that the first stages of the rocket motors of the SS-20 and the SS-25 are, in the words of the INF Treaty, "similar but not interchangeable." According to the Soviets, they are different, but that difference can be discerned only under close inspection. The United States insisted on this right of permanent inspection of this facility to insure that SS-20s were not being illegally manufactured under the guise of the SS-25 program.

The Soviets insisted on reciprocity. We do not have a comparable situation in the United States, but they insisted on reciprocity, and the United States agreed that they could have a similar inspection right of a U.S. plant. The U.S. plant chosen is a former production facility for Pershing II missiles and is located in Magna, Utah. The Soviet plant is located in a town called Votkinsk, which is in the Ural Mountains and is distinguished only by the fact that it was Tchaikovsky's birthplace. One reason the On-site Inspection Agency is located in the Defense Department is that it was anticipated that there may be some problem in persuading people to go to Votkinsk and live there for a year to inspect this plant and conduct some of these other inspections, so it was judged much easier to order people to go than to obtain volunteers.

Let me describe what the production plant inspection entails at Votkinsk. This is going to be at least a possible model for what we will have in START for many plants, as distinguished from just one on each side. There will be an agreed perimeter around the plant at Votkinsk. The Soviets will be permitted one rail-line and one road that must be within 50 meters of each other exiting the plant. All vehicles capable of containing a missile limited by the treaty must exit these two points. The plant can have two other smaller exits that will be monitored by appropriate sensors but that cannot be large enough for an SS-20 or an SS-25 missile to exit. A vehicle that is large and heavy enough to contain an intermediate range missile, that is an SS-20, shall be declared in advance. The Soviets will declare in advance that a missile is going to exit either by the one rail-line or the one road. The U.S. inspecting party can weigh and measure any vehicle exiting these two points to determine if it is large enough and heavy enough for an intermediate-range missile. If it is not large and heavy enough, then it is not subject to further inspection. If it is large and heavy enough but declared in advance not to contain an intermediate-range missile, the inspecting party can inspect the interior of the vehicle and look if there is any shrouded object or container inside that vehicle that the other side does not want to open up. Soviet missiles are all contained in steel canisters whereas U.S. missiles are not. At that point, the Soviets would have to prove to the satisfaction of the inspecting party that it does not contain an SS-20. If they declare that the vehicle contains an intermediate-range missile, then the inspecting party can X-ray the launch canister and weigh and measure the vehicle. The United States will be permitted to open eight of the canisters per year and actually measure the stages of the missile to make sure that it is an SS-25 that is going through, not an SS-20. There will be up to 40 inspectors living full time at this plant checking every vehicle that goes out through these two exits and monitcring smaller vehicles through the other two exits.

My understanding is that the U.S. plant, which is owned by the Hercules Company, that was chosen to be the counterpart to the Votkinsk plant did not receive long lead-time notice that it was going to be the plant selected to have Russian inspectors as guests. It was somewhat concerned as to how it was going to handle this and indeed how it will impact on the company generally. It is concerned, as I am sure other U.S. companies that have focused on this question are concerned, as to what production facility inspections mean for START. Does this mean that lots of U.S. plants are

going to have lots of inspectors? How will that impact on such things as profits? All these problems are workable but they are problems that have to be addressed.

What can we expect from a START agreement? The INF Treaty deals with the elimination of missile systems with ranges from 500 to 5500 kilometers (300–3400 miles). Each side has only a few of these kinds of systems. On the U.S. side this largely means the Pershing II intermediate range ballistic missile and the Ground-Launched Cruise Missile (GLCM). On the Soviet side this largely means that the SS-20, a small number of older SS-4 and SS-5 missiles, and the SS-12 and SS-23 short-range missiles. These systems, which represent about four percent of the nuclear weapon delivery inventory of each party, are all to be eliminated.

The START negotiations, in contrast, cover the central strategic forces of the United States and the Soviet Union. U.S. systems such as the MX and Minuteman ICBMs, the B-52 bomber and Trident submarines will be included. Soviet systems such as the SS-18, SS-19, SS-24 and SS-25 ICBMs and Typhoon submarines will be included. These systems, for the most part, will not be eliminated. Rather, they will be limited in number. It is much more difficult to verify a numerical limit than it is to verify the complete elimination of a system or class of systems. Consequently, stricter verification will be required.

If nondeployed missiles will be covered by the START negotiations, as opposed to only the missiles in the field, the inspection provisions contained in the INF Treaty also will be required except in even greater detail. For example, many short-notice inspections of U.S. and Soviet bases will be required. A great deal of attention will have to be given to the balancing of intrusiveness to obtain effective or adequate verification and whether or not it is in the interest of the United States to allow Soviet inspectors near sensitive U.S. facilities. Many questions will arise. For example, if a base commander wants to run an exercise and 10 Russians are going to show up in the middle of the exercise to inspect the base, it is a complication.

Verification must be effective, however, if a sound agreement that makes a contribution to strategic stability is to be obtained. Although some provisions in arms control agreements are so peripheral that they arguably need not be effectively verifiable, most provisions of a START agreement will have to be verified effectively. The START negotiations deal with the central strategic forces of each side, which are the forces on which both sides rely for their security.

I might mention one specific problem in the START negotiations that is proving to be quite intractable, and that is what to do about sea-launched cruise missiles (SLCMs). No one has yet come up with a system to verify SLCMs effectively. Yet the Soviets insist that they be covered, and undeniably they do have strategic potential. The U.S. Navy needs conventionally armed SLCMs for various anti-ship and ground attack roles, however. Unfortunately, the distinction between a nuclear-armed and a conventionally armed SLCM is slight indeed, except at the time one impacts. So the parties have a very complicated task ahead of them with respect to verification of a START Treaty.

Everyone from the President on down believes that a START Treaty is in the U.S. national security interest as long as its provisions are carefully formulated and it is effectively verifiable. It is a difficult task, much more difficult than the INF Treaty. In the end it seems to me that the START process will inevitably mean increased U.S.-Soviet cooperation. We have seen what will have to be done in cooperation with the Soviets to carry out the verification provisions of the INF Treaty. Already this administration is making plans with the Soviets as to how that treaty will be implemented including such issues as what kind of food the inspectors are going to receive, what

sort of protective equipment they will be provided, who will have the right to say that they should have protective equipment, and so forth. There are many issues such as those that have to be addressed. Under a START Treaty the efforts required will be even greater.

COMMENTS BY STEPHEN GOROVE*

In my comments I would like to take a brief but broader look at the problems of arms control and verification in order to see where we came from and where we stand. Do we really have a new hope in a new era? I think if one looks back at history, one finds a long list of different types of agreements, starting with peace treaties, through the Hague Conferences at the beginning of the 20th century and the interwar conferences, to the arms control and disarmament efforts of the space era and the atomic age. One can recall a number of more recent efforts and accomplishments including the "Baruch plan," the Limited Test Ban Treaty, the Outer Space Treaty, and the ABM Treaty.

I think one area that has possibly the most success is the international network of safeguards to prevent the proliferation of nuclear weapons and technology. This network includes a host of bilateral agreements, regional agreements, such as the European Atomic Energy Community (EURATOM), and multilateral agreements, such as the Nuclear Non-Proliferation Treaty. We have gained several insights from this network. To state it briefly, we have learned that at least four criteria are required to make progress in arms control: (1) national security interests cannot be adversely affected; (2) there must be tangible incentives for entering into an agreement; (3) carefully chosen and carefully limited objectives must be set; and (4) solutions must be attempted on a step-by-step basis. I think these criteria have been followed in many agreements including the INF Treaty.

Now I would like to mention a couple of concerns raised by some of the critics of the INF Treaty. First, critics say there is a discrepancy with respect to intelligence estimates on the actual number of Soviet missiles. Second, critics say that SS-20 missiles could be concealed easily in violation of the INF Treaty because they are mobile. Third, there may be no effective way to verify the range of a cruise missile. Range can be changed by merely changing the size of the warhead and the fuel load. Fourth, intrusive "anytime, anywhere" inspections may threaten the security of the parties even while assisting in verification.

The EURATOM experience may contain a solution at least to this fourth criticism. EURATOM has a system allowing inspection anytime anywhere except for certain designated facilities. In that way essential military installations are protected and yet at the same time the chance of concealment and breach of the obligations is reduced.

At this time, I would like to provide a short assessment of the INF Treaty. Is it a milestone in a historic power struggle or merely a small step away from nuclear brink? Some, like Henry Kissinger, believe that the INF Treaty should be endorsed, not because there is any merit in it, but because the damage of not ratifying it would be greater than the harm that it may cause if ratified. I think the INF Treaty, whatever defects it may have, has some very significant merits. Limited as its scope and coverage happen to be, it is a step forward. In particular, it has created significant precedent with respect to detailed onsite inspection of facilities and activities on foreign soil. An agreement between the superpowers bargaining at arms length that permits inspec-

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tions by a large number of visiting and resident inspectors over a long period of time on each other's territory is an important accomplishment.

But while this is a good omen for the future, I do not think we ought to be carried away in our expectations. I think it might be worth recalling here the McCloy-Zorin exchange of letters in 1961 in relation to the verification of retained forces and armaments. In that exchange Mr. Zorin stated that while the Soviet Union favored international control over measures of general and complete disarmament, it was opposed resolutely to the establishment of such control over the limitation of armaments. The reason for Mr. Zorin's statement can be found in the EURATOM experience. There have been significant stumbling blocks to complete and open inspection even in as closely knit a community as the European community in areas which touch on vital national security interests. So, we should not get carried away with our expectations, although I do think that we have new hope for a new era.

DISCUSSION

Mr. GRAYBEAL commented concerning the utility of onsite inspections. He said that the pendulum might have swung too far concerning what was expected from onsite inspections. Arms control agreements had to be verifiable by unilateral, or national technical means, complemented by cooperative measures such as inspections and a data-base exchange. He said that onsite inspections at declared facilities deterred cheating, but that the United States was at a relative disadvantage, because the Soviet intelligence system was so much better than the U.S. system. The Soviets knew not only which facilities contained sensitive information but even which buildings and rooms contained that information. The United States did not have a comparable capability. So onsite inspections would not be a panacea of future arms control.

Mr. GRAYBEAL also commented concerning Mr. Graham's remark that only a small number of systems would be eliminated by the INF Treaty. He agreed that the INF Treaty was largely of political rather than of military importance but pointed out that it was no small thing when the Soviet Union eliminated 1,752 missiles and the United States eliminated 867 missiles. He also pointed out that even 10 missiles was no small matter when the amount of devastation they could cause was considered.

Mr. GRAYBEAL then commented concerning certain issues raised by Professor Gorove. He said that not knowing the exact number of SS-20s should not be an impediment to ratification of the INF Treaty since the number provided to the United States was within the spread of U.S. intelligence estimates. And even if there were a few hundred concealed SS-20s, their military utility eventually would be reduced greatly because the supporting infrastructures would be eliminated and it would be difficult to test such missiles. Finally, Mr. GRAYBEAL agreed that verification of cruise missile limits was a legitimate problem.

Mr. GRAHAM agreed with Mr. Graybeal's assessment that a large number of missiles would be eliminated under the INF Treaty. He commented that only a few classes of systems were affected, however.

Mr. EARLE expressed concern that an impression had been created that verification of a START agreement would be much more difficult than verification of the INF Treaty. He said that the START Treaty might not be harder to verify than the INF Treaty. The START negotiations should not be prejudged merely because, as Mr. Graybeal had remarked, the INF Treaty had a great potential for mischief. Mr. EARLE also stated that he did not want it inferred that he agreed with almost anything that Mr. MOBBS had said merely because he was not making any specific comments. Mr. MOBBS commented that he did not take any comfort in the fact that the Soviet

statement of the number of their SS-20s fell within the range of U.S. intelligence estimates, because that range was such a big target it would have been hard to miss and U.S. estimates had been published repeatedly in the open media. The Soviets would have been foolish not to place their number within the range of U.S. estimates.

Mr. MOBBS then responded to certain issues raised by Professor Gorove as to the proposal modeled on the EURATOM experience to have anytime-anywhere inspections but to exclude certain facilities. Mr. MOBBS said that there were a number of problems with such a proposal. First, there would be hundreds, probably thousands, of structures in the United States alone that might have to be excluded. Second, many of the structures suitable for treaty-limited activities had nothing to do with such activities; yet to exclude all such structures would probably be viewed as gutting the provision for anywhere-anytime inspection. Third, some places where treaty-related activities occurred or could occur also might conduct other activities unrelated to a treaty. Some of those activities might be sensitive and could be seriously jeopardized by such inspections. Fourth, putting a structure on the exclusion list could in and of itself provide valuable intelligence to unfriendly countries.

Professor GOROVE asked the panel to comment on article XIV of the INF Treaty that provided that the parties had to abide by the treaty, and they should not assume any obligations contrary to the treaty.

Mr. MOBBS said that he would like to know what that provision meant, because it was a departure from comparable provisions in SALT II and other treaties. He said that it was a very troublesome provision, because either the language was redundant and therefore could be attributed to bad drafting or it was intended to impose an additional obligation the nature and scope of which were unclear. He said that he was concerned that the provision might be used as an obstacle to the already difficult cooperation between the United States and its NATO allies in various military programs not covered by the INF Treaty.

Mr. GRAHAM stated that article XIV did not affect existing programs of cooperation between the United States and NATO. According to Mr. GRAHAM, article XIV was basically a pacta sunt servanda provision. Certain future programs of cooperation would not be permitted, however. Also, there were other provisions of the INF Treaty that would be applicable to the existing programs of cooperation, such as article VI, paragraph 1, that provides that production and flight testing of intermediate range missiles under the treaty were prohibited.

Mr. GRAHAM also stated that the United States had made an effort to prevent the Soviets from forcing a noncircumvention provision comparable to the one that was in the SALT II Treaty upon the United States. Article XIV was much more limited than the noncircumvention provision in SALT II.

BASIL YANAKAKIS* commented that verification of any arms control agreement could not be considered adequate or efficient if it were isolated from the overall questions of normal relations between the United States and the Soviet Union. According to Mr. YANAKAKIS, the question was what degree of diplomatic, political or economic relations could be considered sufficient to guarantee adequate or efficient verification. In Mr. YANAKAKIS' judgment it was a mistake to sign the INF Treaty without incorporating in that treaty a series of normalization of relations items.

Mr. EARLE disagreed with Mr. Yanakakis' assumption and his conclusion. He said that Mr. Yanakakis' statement brought up the old issue of linkage. He also said that the arms relationship or the strategic relationship between the parties must be ad-

*Of the Massachusetts Bar.

dressed without regard to other issues. According to Mr. EARLE, the logic of the statement carried to the ultimate was that a country at war could not discuss a cease-fire with its adversary.

EDWIN SMITH* related that, according to the *New York Times* of April 6, 1988, Paul Nitze had proposed a solution to the sea-launched cruise missile verification problem. The proposal, as reported by Michael Gordon, was that all nuclear weapons aboard naval vessels other than ballistic missiles aboard submarines would be prohibited. That would preserve the U.S. Navy's conventionally armed cruise missiles while greatly facilitating overall verification, because no vessels other than submarines would use nuclear weapons storage facilities while in port. According to Professor SMITH, such a proposal also would reduce the crisis stability problems posed by potential use of nuclear depth charges and surface-to-air nuclear missiles, the only other nuclear weapons on naval vessels. On the other hand, such a proposal could eliminate sea-based nuclear weapons systems, such as nuclear-capable tactical aircraft, which might be needed more than ever because of the elimination of nuclear systems under the INF Treaty. Professor SMITH then asked the panel whether Mr. Nitze's proposal answered some of the cruise missile problems and whether there was any other way to deal with the verification problem presented by sea-based cruise missiles.

Mr. GRAHAM responded that only persons with access to the internal negotiating posture of the Reagan Administration could respond properly to Mr. Smith's question. Mr. GRAHAM also remarked that whether Mr. Nitze's solution was appropriate or not depended on the relative importance of nuclear arms on naval vessels in terms of the force posture of both sides.

CONSTANTINE G. PAPAVIZAS**
Reporter

DEEP SEABED MINING: THE WORK OF THE PREPARATORY COMMISSION

The panel was convened at 10:30 a.m., April 21, 1988, by its Chair, John E. Noyes.***

REMARKS BY JOHN E. NOYES

On April 8, 1988, the Preparatory Commission for the International Seabed Authority and the International Tribunal on the Law of the Sea concluded meetings of its sixth session in Kingston, Jamaica. We now have had more than five years to observe the work of the Commission, to assess the licensing of exploratory activities of mining consortia under national legislation, and to evaluate efforts to resolve overlapping claims to minesites. My remarks will outline the broad and flexible mandate of the Preparatory Commission, highlight a few of the Commission's recent activities—activities that the panelists will explore in more depth—and note factors that will influence the future shape of a regime or regimes governing seabed mining.

The Preparatory Commission provides transitional planning for the International Tribunal for the Law of the Sea and the International Seabed Authority. Under the

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