SALT AND THE U.S. STRATEGIC FORCES BUDGET

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PREFACE

This paper is intended to provide a more detailed background to the brief discussion of SALT (Strategic Arms Limitation Talks) in Budget Options for Fiscal Year 1977 (March 15, 1976).

In recent years, SALT has been an important backdrop to discussion of the U.S. budget for strategic forces. This paper recalls the principal concerns and objectives of the United States during the first phase of SALT (November, 1969 through May, 1972), which culminated in the Treaty Limiting Anti-Ballistic Missile Systems and the Interim Agreement on Strategic Offensive Arms. It sketches the principal U.S. objectives in SALT II (which began in November, 1972 and continues through the present) and outlines developments in both Soviet and U.S. strategic forces since the SALT I agreements. It assesses the budgetary impact of SALT to date and possible future impacts, including the budgetary effect of a hypothetical breakdown of SALT.

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SUMMARY

U.S. SALT objectives of stability and cost constraint have been achieved in the case of ABM systems. However, in the case of strategic offensive programs, the SALT objectives were not achieved by the 1972 agreements, in light of the continued momentum of Soviet programs with a destabilizing potential.

The principal objectives of the United States for SALT I were to enhance the stability of mutual deterrence by limiting threats to the survivability and effectiveness of strategic offensive forces and to constrain the costs of the arms competition.

The 1972 ABM Treaty and the 1974 protocol advanced both SALT objectives. The 1972 ABM Treaty increased the likelihood that strategic missile forces would be able to penetrate to their targets, that both nations' cities would remain hostage to retaliatory attacks, and that the stability of deterrence would thereby be enhanced. In addition, the agreements permitted the United States to avoid spending about $11 billion programmed for ABM deployments between fiscal year 1973 and fiscal year 1981. Although the effectiveness of retaliatory forces was facilitated by the ABM Treaty, it did preclude one expensive means of enhancing survivability: active defense of a large force of ICBMs (intercontinental ballistic missiles) by an ABM system. However, on balance, the ABM Treaty seems to have advanced both the stability and cost-avoidance objectives of SALT I. These accomplishments have been somewhat overlooked because of recent disappointment over the accomplishments of SALT in limiting strategic offensive forces.

In the case of strategic offensive forces, there is reason to question whether the stability and cost-avoidance goals were accomplished by SALT I in 1972, in light of subsequent force developments, particularly Soviet. Since SALT I, the Soviets have concentrated on an unprecedented modernization of their ICBM force. This has enabled them to increase the very type of threat which had been a principal concern of the United States in SALT I, and which it had hoped had been significantly curbed by SALT I: the destabilizing capability of a force of large Soviet ICBMs to destroy a high percentage of the U.S. ICBM force. Prior to and during SALT I, there was only one Soviet ICBM system, the SS-9, which posed that destabilizing potential. Since SALT I, there are at least two, if not three, such systems: the SS-18 follow-on to the SS-9; and the SS-17 and SS-19, the follow-on replacements for the widely deployed SS-11. This continued Soviet momentum in such programs--the very type that the United States had tried in 1969-72 to convince the Soviets would be contrary to the stability goal of SALT--raises troubling questions: Do the Soviets share

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the objective of stability and believe an attempt to achieve some form of major strategic advantage would be futile?

Since SALT I in May, 1972, the U.S. strategic forces budget has declined significantly in real terms, primarily due to large reductions in expenditures on ABM. The fiscal year 1977 budget request reverses that decline. Since SALT I, the U.S. budget for strategic offensive forces has remained about level in real terms, emphasizing modernization of strategic offensive forces with measures that are generally thought to enhance the stability of deterrence. These developments include measures to increase the probability of successful bomber penetration and to improve the survivability of both SLBM (submarine-launched ballistic missiles) and bomber forces. U.S. MIRVs (multiple independently targetable reentry vehicles) have relatively small yields and presently do not pose a more than modest threat to Soviet ICBMs. In response to the growth in Soviet counterforce capability to destroy a large percentage of the Minuteman (ICBM) force, the United States has pursued development of a new ICBM (M-X) that could be less vulnerable and development of improved hard-target (e.g., ICBM silos) destruction capability, with more accurate and higher-yield reentry vehicles.

SALT, Force Modernization, and Basis for Potential Savings

> SALT has not constrained some important threats, such as air defense and antisubmarine warfare (ASW), to the survivability and effectiveness of components of the U.S. TRIAD. Therefore, SALT cannot be expected to save substantial amounts by eliminating the need for some expensive U.S. modernization efforts. Given the U.S. policy of maintaining rough parity or "essential equivalence," major savings from SALT are instead more likely to result from substantial reduction of strategic force levels.

The principal basis for the increase in the budget for strategic forces for fiscal year 1977 and during fiscal years 1977-81 is for modernization of the TRIAD, especially the TRIDENT submarine and missile and the B-1 bomber programs. If a TRIAD of strategic offensive systems (SLBMs, ICBMs, and bombers) is to be maintained, then it should be noted that SALT is not expected to constrain some important aspects of the threat (air defense, ASW, and ICBM throw-weight) to the survivability and effectiveness of the TRIAD. As a result of this and of the aging of some force components such as submarines, SALT cannot be expected to avoid the need for some expensive force modernization. Modernization needs in general, however, do not necessarily require a particular advanced design such as the B-1 or TRIDENT.

Given the high cost of new systems, negotiated, mutual force level reductions could produce major savings. However, a realistic prospect for major savings from force level reductions would be for the longer term. Small, mutual reductions of about 10-15 percent (e.g., 240-360 launchers) would have very little near-term budget impact. Even negotiated major reductions (e.g., 25-33 percent) in U.S. force levels would not have a comparable impact on the U.S. budget for strategic nuclear forces because the annual recurring costs of some existing deployed systems are relatively quite low. This is particularly true with the 1,000 Minuteman ICBMs which account for nearly 45 percent of the U.S. strategic offensive launcher level, but which have annual recurring costs for their deployment of about $300 million, or only 3 percent of the initial request for fiscal year 1977 for the direct budget costs of U.S. strategic offensive forces.

Substantial force level reductions could provide a realistic basis for substantial savings in the longer term (fiscal year 1980 and beyond). Such longer-term savings would result from the lower force procurement goals and associated lower force operating costs for the next generation of U.S. strategic forces.

Budgetary Impact of a Breakdown of SALT

A breakdown or failure of SALT can be defined differently, and various U.S. responses could be considered. Given the new U.S. programs underway related to Soviet developments unconstrained by SALT, a formal suspension of the talks or acknowledged deadlock would not necessarily require any new U.S. programs not already underway or under active consideration. Selective acceleration of some programs in response to one possible basis for a breakdown--a hypothetical Soviet violation of the ABM Treaty by deploying prohibited systems--could add a total of about $10 billion to the fiscal year 1977-81 Defense Department (DoD) budget, thereby increasing the annual total by 1-3 percent.

A breakdown or failure of SALT could develop or occur in more than one way. The actual circumstances of a breakdown and associated atmosphere would affect the general direction, priorities, and pace of a U.S. response.

The U.S. has already undertaken, or has under active consideration, major new programs that provide hedges against Soviet developments in areas that are not constrained by SALT, as noted above. Given this posture,

the United States would not necessarily have to undertake major new programs if SALT were to break down. Acceleration of some, but not all, new strategic programs might be undertaken. Given the lead times involved, about 60 percent of the impact of an increase in the strategic forces budget would occur in the last two years of the fiscal years 1977-81 period. Consequently, if negotiations resumed within a few months or a year, then most of the additional costs could be avoided.

Given the momentum in Soviet strategic offensive programs since SALT I, it is difficult to visualize a further increase by the Soviets in that area as a basis for a suspension of SALT. If it is assumed that a hypothetical breakdown in SALT would occur because of Soviet developments in strategic defensive programs, particularly as a result of a Soviet deployment of advanced ABM capability in violation of the ABM Treaty, then a postulated U.S. response might cost about $10 billion over fiscal years 1977-81 in fiscal year 1977 dollars, growing in impact from 1 percent of the fiscal year 1977 budget to nearly 3 percent of the fiscal year 1981 budget level projected by the Defense Department.

INTRODUCTION

The strategic arms limitation talks (SALT) between the United States and the Soviet Union began formally in November, 1969. These talks, called SALT I, continued through the May, 1972, summit meeting in Moscow, and produced the Treaty on the Limitation of ABM (anti-ballistic missile) Systems and the Interim Agreement on Strategic Offensive Arms. While the ABM Treaty was permanent, the Interim Agreement was for 5 years and would expire in October, 1977, according to its terms.

The SALT II process began in November, 1972, and has continued to the present, including an accord reached in Vladivostok in November, 1974, by President Ford and General Secretary Brezhnev. This accord was meant to provide the central provisions of a follow-on treaty to the Interim Agreement.

Detente: A Context for SALT

Efforts to achieve detente with the Soviet Union--in the general sense of relaxation of tension, less frequent explosive confrontations--predated the Nixon Administration. It was hoped by some that a containment policy would produce a moderated relationship with the Soviet Union.

In 1963, after the Cuban missile crisis, President Kennedy stressed the mutuality of interest between the United States and the Soviet Union in avoiding nuclear destruction and in curbing expenditures on weapons, and the need for improved communication and dialogue to reduce the chances of miscalculation in a crisis.[1] The Vietnam war, the Soviet invasion of Czechoslovakia, and other developments delayed the beginning of a relatively continuous dialogue to advance detente until late 1969. The Nixon Administration then began efforts to move from "an era of confrontation to one of negotiation" with the Soviet Union.

Detente was sought initially by the Nixon Administration as a political environment in which the basic competition of the two superpowers would be moderated as a result of the benefits of improved relationships in several policy areas (not only arms control, but also trade, for example). It was hoped that a "vested interest" or stake in restraint and cooperation would result from a broadened pattern of relationships and would outweigh an inclination toward confrontation.

At the time the SALT I agreements were reached, the Administration hoped that SALT would be part of the broader pattern or "web" of improved relationships, rather than an "isolated and incongruous" principal relationship.[2]

In recent years, particularly since the October, 1973, war in the Middle East, negotiations to reach further agreement on strategic arms control have become the central, dominating element in the U.S.-Soviet dialogue.

CHAPTER I

SALT I: OBJECTIVES AND ACCOMPLISHMENTS

U.S. Concerns in SALT I

Prior to, but particularly during SALT I, there were two developments in strategic forces that were of paramount stated concern to the United States:

1. The growing Soviet force of large "modern heavy" intercontinental ballistic missiles (ICBMs), particularly the SS-9, that could be destabilizing by posing a threat to the survivability of U.S. land-based ICBMs.[1]

2. ABM programs in both the United States and the Soviet Union, which had a potential for wide deployment, that could reduce the effectiveness of second-strike deterrent forces. These programs could thereby make a first strike more attractive to a side with a clear advantage in ABM systems that could greatly limit the damage from a second strike.[2]

These concerns were based on the potential of these developments to destabilize the strategic nuclear relationship by threatening the survivability and effectiveness of forces for assured, second-strike retaliation, thereby undermining deterrence of a first-strike attack.

It became a fundamental tenet of the U.S. position in SALT I that not only ABM but also strategic offensive force developments could destabilize the strategic balance and, therefore, both sources of instability should be constrained.[3] This position was stated succinctly in 1971 and 1972:

> Two principles should be recognized. The strategic balance would be endangered if we limited defensive forces alone and left the offensive threat to our strategic forces unconstrained. It would also be dangerous, however, if only offensive forces were restrained, while defenses were allowed to become so strong that one side might no longer be deterred from striking first. To limit only one side of the offense-defense equation could rechannel the arms competition rather than effectively curtail it.[4]

> . . . It would be dangerous if, while constraining offensive forces, strategic defenses were allowed to increase without limit. In sufficient numbers and sophistication, ABM systems deployed to defend cities can reduce capabilities to retaliate. Thus, unlimited ABM expansion ultimately would force an offensive buildup.[5]

The Soviet Union initially wanted to limit only ABM systems--where the United States had a dynamic program—and to place no limitations on strategic offensive programs, in which they had considerable momentum. This Soviet position, coupled with a continuing buildup in their programs, led to questions during SALT I about the intent behind their program momentum and whether the Soviets shared the U.S. interest in stabilizing the strategic balance.[6] In May, 1971, the Soviet leadership agreed to having both a treaty on ABM systems and an interim agreement on strategic offensive forces.[7]

Principal U.S. Objectives

The principal concerns of the United States noted above were reflected in the principal U.S. objectives in SALT I. These objectives were to enhance the long-term stability and constrain the costs of the U.S.-Soviet strategic arms competition.[8] Longer-term stability, it was judged, would be enhanced by reducing or constraining threats to the survivability and effectiveness of retaliatory forces for deterrence.

Provisions of SALT I Agreements[9]

ABM Limitations

SALT I produced the permanent Treaty on the Limitation of ABM Systems that imposed major quantitative as well as qualitative restraints on ABM systems. ABM deployment was limited to two sites in each country, with 100 launchers per site. ABM radars were limited by both quantitative and some qualitative restraints. The two deployment areas were so restricted and separated that they could not provide a nationwide ABM defense or become the basis for developing one. Important prohibitions were placed on qualitative improvements such as rapid reload and multiple missile launchers. To deal with future, possibly destabilizing technology, the United States and the Soviet Union agreed not to develop, test, or deploy sea-based, air-based, space-based, or mobile, land-based ABM systems and their components.

In 1974, the ABM Treaty was amended by a protocol reducing the deployment limitations from two sites to one site with 100 launchers. In accord with a 1975 Congressional directive, the single U.S. ABM site at Grand Forks, North Dakota, has been deactivated and is being dismantled. Only the Perimeter Acquisition Radar (PAR) will remain operational to supplement the U.S. early-warning network.

The 1972 ABM Treaty and the 1974 ABM protocol increased the likelihood that strategic missile forces would be able to penetrate to their targets, that both nations' cities would remain hostage to retaliatory attacks, and that the stability of deterrence would thereby be enhanced. In addition, the agreements permitted the United States to avoid spending about $11 billion programmed for ABM deployments between fiscal year 1973 and fiscal year 1981. Although the effectiveness of retaliatory forces was facilitated, the ABM Treaty did preclude one expensive means of enhancing survivability: active defense of a large force of ICBMs. On balance then, the ABM agreements seem to have advanced both the stability and cost-avoidance objectives of SALT I. The accomplishments of the ABM Treaty have been somewhat overlooked because of recent expressions of disappointment with the accomplishments of SALT in limiting strategic offensive forces.

Limitations on Strategic Offensive Forces

Launcher Levels. SALT I also produced an Interim Agreement on Strategic Offensive Arms that was to last five years, during which period a more comprehensive and "permanent" agreement would be negotiated. The Interim Agreement did not address bombers, but did set numerical limits on the number of ICBM and submarine-launched ballistic missile (SLBM) launchers that the United States and the USSR could deploy. Modernization and replacement within some constraints were allowed by the Interim Agreement. It also permitted a limited, one-way "freedom to mix" by substituting SLBMs for ICBMs. The numerical limitations are shown in Table 1.

TABLE 1

LIMITS ON NUMBERS OF LAUNCHERS
SET BY THE SALT INTERIM AGREEMENT

	U.S.	USSR
SLBMs	656 - 710[a]	740 - 950[b]
ICBMs	1,054 - 1,000	1,618 - 1,408
	1,710	2,358

a. The United States could build up to 710 SLBMs on 44 ballistic missile submarines by trading in 54 Titan II ICBMs.

b. The USSR could build up to 950 SLBMs on 62 ballistic missile submarines by replacing 210 older ICBMs (SS-7 and SS-8) with SLBMs.

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The disparity in launcher levels was acceptable to the United States on an interim basis because strategic bombers (of which the United States had considerably more) were not included and because U.S. advantages in accuracy and deployment of multiple independently targetable reentry vehicles (MIRVs) were judged to offset temporarily the Soviet advantages in numbers of launchers and ICBM throw-weight.

Efforts to Constrain Heavy ICBMs. By freezing the number of SLBM and ICBM launchers operational or under construction at the time (July 1, 1972), the Interim Agreement in effect placed a sub-ceiling on the number of "modern heavy" ICBM launchers (silos). As noted above, the growing Soviet deployment of the heavy SS-9 missile had been a major concern to the United States prior to and during the SALT I negotiations. The SS-9 force was considered to be a source of potentially serious instability because of the counterforce capability that such a very large payload system could have against the U.S. Minuteman force. It was hoped by senior U.S. negotiators that the Interim Agreement would sharply constrain the growth of such capability by preventing further deployment of such "modern heavy" ICBMs by the constraints placed on conversion of silos in the process of generally allowed modernization. Specifically, the Interim Agreement itself prohibited converting launchers (silos) for "light ICBMs," such as the widely deployed SS-11, into launchers for modern "heavy" ICBMs, such as the SS-9. The terms of the agreed interpretations of the Interim Agreement proscribed "significantly" (greater than 10-15 percent) increasing the "dimensions of land-based ICBM silo launchers." The sublimit effectively limited the Soviet Union to no more than 285-313 "modern heavy" ICBMs, such as the SS-9, and was generally regarded as a major accomplishment of SALT I. Unfortunately, the Soviets did not agree to defining a "heavy" missile, as the United States had urged.[10] New Soviet programs since SALT I, discussed in Chapter III, have significantly vitiated the effectiveness of the sub-ceiling constraint.

The Executive Branch argued in 1972 that the Interim Agreement would arrest the momentum of the "dynamic and accelerated"[11] Soviet ICBM and SLBM programs, thereby preventing an even larger "numerical" gap--in numbers of ICBM and SLBM launchers--than would otherwise have developed in the absence of the Interim Agreement's freeze or ceiling provisions.[12] As Dr. Kissinger said, "The Agreement will stop the Soviet Union from increasing the existing numerical gap in missile launchers."[13]

Dr. Kissinger expressed the opinion that the Interim Agreement had prevented the conversion of light Soviet ICBMs into heavy ICBMs:[14]

> Now with respect to the definition of heavy missiles, this was the subject of extensive discussion at Vienna and Helsinki, and finally Moscow. No doubt, one of the reasons for the Soviet reluctance to specify a precise characteristic is because undoubtedly they are planning to modernize within the existing framework some of the weapons they now possess. The agreement specifically permits the modernization

> of weapons. There are, however, a number of safeguards. First, there is the safeguard that no missile larger than the heaviest light missile that now exists can be substituted.
>
> Secondly, there is the provision that the silo configuration cannot be changed in a significant way and then the agreed interpretive statement or the interpretive statement which we made, which the other side stated reflected its views also, that this meant that it could not be increased by more than 10 to 15 percent.
>
> We believe that these two statements, taken in conjunction, give us an adequate safeguard against a substantial substitution of heavy missiles for light missiles. So we think we have adequate safeguards with respect to that issue.

Ambassador Gerard C. Smith, chief of the U.S. SALT delegation, stated in May, 1972:[15]

> Turn, now, for a minute to the offensive side. . . . What we are trying to do is to set up a useful device that will hold the situation while we negotiate, hopefully, a matching treaty; that is, to match the treaty in the ABM defense field. I think that the measures that we have succeeded in spelling out in this interim agreement with the Russians will do just that. There will be a commitment on their part not to build any more of these ICBMs that have concerned us over the years. That commitment will extend to not building such things as SS-9s, and there will be provisions that if the sides want to increase their submarine missiles, which, if you can say so, are a more benign form of weapons system than ICBMs, they may do so, but only at the price of a substantial reduction program in other weapons systems. (Emphasis added.)

In subsequent Congressional testimony, Ambassador Smith also stated that:[16]

> We have put them on clear notice that any missile having a volume significantly larger than their SS-11, we will consider a heavy ICBM, and if they deployed weapons, missiles, having a volume significantly larger than the SS-11, we would consider that as incompatible with the Interim Agreement.

It was expected that, in the five-year period of the Interim Agreement, the Soviet Union would, as permitted, modernize (such as with MIRVs) its ICBM systems,[17] but the point was made that the Soviets could best compete in quantitative terms and that type of growth had been constrained.[18]

However, subsequent to the SALT I agreement, the Soviets demonstrated their capability to compete in qualitative improvements, such as substantially greater ICBM throw-weight within silo size constraints, extended range of SLBMs, and accuracy improvements. Within a year or so of the Interim Agreement, the United States witnessed an unprecedented modernization program of the Soviet ICBM force that had a surprising scope and potential threat. These developments are described in Chapter III.

CHAPTER II

SALT II: OBJECTIVES AND OPEN QUESTIONS

U.S. Objectives in SALT II

A principal U.S. objective in SALT II was to accomplish on a longer-run basis what it was hoped had been temporarily achieved by the "freeze" or ceilings of the Interim Agreement. In May, 1972, at the conclusion of the negotiations for SALT I, the U.S. delegation articulated a principal goal of SALT II:

> The U.S. delegation believes that an objective of the follow-on negotiations should be to constrain and reduce on a long-term basis threats to the survivability of our respective strategic retaliatory forces.[1] (Emphasis added.)

In subsequent testimony before Congress, Ambassador Smith and Mr. Paul H. Nitze, a principal member of the SALT delegation, stated the hope that SALT II might or should seek to constrain throw-weight and actually reduce the level of launchers, particularly those with large throw-weight.[2]

In September, 1972, Congress, in the resolution approving the Interim Agreement, adopted the "Jackson Amendment." That amendment called for applying in SALT II the principle of equality in the SALT I ABM Treaty to the force limitations in a follow-on treaty on strategic offensive weapons to succeed the Interim Agreement. The key section of the amendment stated:

> The Government and the people of the United States ardently desire a stable international strategic balance that maintains peace and deters aggression. The Congress supports the stated policy of the United States that, were a more complete strategic offensive arms agreement not achieved within the five years of the interim agreement, and were the survivability of the strategic deterrent forces of the United States to be threatened as a result of such failure, this could jeopardize the supreme national interests of the United States: the Congress recognizes the difficulty of maintaining a stable strategic balance in a period of rapidly developing technology; the Congress recognizes the principle of United States-Soviet Union equality reflected in the antiballistic missile treaty, and

> urges and requests the President to seek a future treaty that, inter alia, would not limit the United States to levels of intercontinental strategic forces inferior to the limits provided for the Soviet Union; and the Congress considers that the success of these agreements and the attainment of more permanent and comprehensive agreements are dependent upon the maintenance under present world conditions of a vigorous research and development and modernization program as required by a prudent strategic posture. (Emphasis added.)

Congress also adopted amendments to the resolution which stressed the desirability of reduction in strategic arms and:[3]

> . . . the success of the interim agreement and the attainment of more permanent and comprehensive agreements are dependent upon the preservation of longstanding United States policy that neither the Soviet Union nor the United States should seek unilateral advantage by developing a first-strike potential.

In May, 1973, the President's Foreign Policy Report to Congress stated:

> In sum, a future agreement should:
> -- establish an essential equivalence[4] on strategic capabilities among systems common to both sides;
> -- maintain the survivability of strategic forces in light of known and potential technological capabilities;
> -- provide for the replacement and modernization of older systems without upsetting the strategic balance;
> -- be subject to adequate verification;
> -- leave the security of third parties undiminished.[5] (Emphasis added.)

Hope was expressed that the limits on ABM systems "should provide an incentive for limiting further growth in offensive capabilities" and that it would be possible in SALT II to "determine where a balance of capabilities enhances stability and where it could generate severe competition for advantage in first-strike capabilities."[6]

During SALT II, the Executive Branch proposed to pursue what it characterized as a parallel or "two-track" approach:

-- We have entered the current phase of the strategic arms limitation talks with the same energy and conviction that produced the initial agreements. Until these negotiations succeed we must take care not to anticipate their outcome through unilateral decisions.

-- We shall continue our research and development programs and establish the production capacity to sustain a sufficient strategic posture should new agreements prove unattainable. This effort also dissuades the other side from breaking the agreement.[7]

It was recognized that the second track was important to the success of the first, and that U.S. strategic programs accordingly could either undermine or support the negotiations, and that difficult judgments would be involved. As Dr. Kissinger said:

> The question is: If we spend too little on defense, if we create such a unilateral weakness, then we destroy their incentive to negotiate seriously. If we spend too much and give them the idea that we are gearing up simply for getting a tremendous spurt to get ahead of them, then we create the other problem.[8]

It was recognized that achieving an agreement in SALT II would be difficult, particularly because it would address some qualitative aspects of the strategic offensive arms competition--such as MIRVs--and that these aspects would be harder to verify with confidence than quantitative constraints such as the ceilings in the Interim Agreement.[9] As SALT II has continued since 1972, the expected completion of negotiations has slipped and the expected length of the period to be covered by a follow-on treaty to the Interim Agreement has diminished. In June, 1973, the U.S. and Soviet leadership announced the hope that a broader, "permanent agreement" could be reached in 1974.[10] By mid-1974, an "extension of the Interim Agreement for a period of two to three years" beyond its expiration in 1977 was being discussed.[11] In November, 1974, at Vladivostok, it was decided that a new agreement would cover the period from October, 1977, through December 31, 1985. Hope was then expressed by President Ford and General Secretary Brezhnev that an agreement could be reached in 1975.[12]

Vladivostok Accord

In November, 1974, the United States and the Soviet Union concluded the Vladivostok accord. That accord reflected the principle of equality in strategic forces emphasized in the Jackson amendment.[13] The Vladivostok accord, meant to establish key provisions in an agreement lasting through 1985, stipulated that both the United States and the USSR accept

an equal aggregate ceiling of 2,400 launchers (including strategic bombers, which had not been covered by the Interim Agreement) and a sublimit of 1,320 MIRVed launchers.

The Vladivostok accord continued until 1985 the subceiling of the Interim Agreement on larger, modern ICBMs. Except for that and the subceiling on MIRVed launchers, there would be freedom to mix the composition of the forces among bombers, SLBMs, and ICBMs. This "freedom to mix" would thus be greater than the limited, "one-way" freedom in the Interim Agreement to substitute some new SLBMs for older ICBMs. As in the Interim Agreement, no additional fixed ICBM silos would be allowed. In response to Congressional concern, a commitment has been made to negotiate reductions below the 2,400 ceiling as soon as the agreement on the implementation of the Vladivostok accord has been reached.

The prolonged negotiations since Vladivostok have dealt with what vehicles are to be included within the 2,400 ceiling and, specifically, "such contentious issues as the status of the [Soviet] Backfire bomber, cruise missiles, MIRV verification, and the definition of heavy missiles."[14]

The first DoD posture statement after Vladivostok, that of Secretary Schlesinger in February, 1975, stated:[15]

> Assuming that the Soviet leaders exhibit restraint in their application of the agreement's principles, we are prepared to exercise restraint as well. However, until we obtain solid evidence of Soviet restraint, we shall plan for deployment of approximately 2,400 strategic delivery vehicles and 1,320 MIRVed missiles. How we proceed on these accounts will depend essentially on the actions of the Soviet Union. (Emphasis added.)

Later in the statement, the table used for comparing U.S. and Soviet strategic force levels accounted for the United States having in mid-1975 a total of 2,208 strategic launchers against the Vladivostok ceiling, compared to the USSR's having 2,450.[16]

In some contrast, Secretary Rumsfeld the next year was less definite on the question of planning toward the force ceilings in the Vladivostok accord. He stated:[17]

> Pending outcome of the SALT II negotiations, the Department has continued to plan U.S. forces within the bounds of the Vladivostok understanding, as well as within the more specific constraints of the agreements signed in Moscow in 1972 and 1974. Current estimates of the most likely Soviet force levels assume that

the Soviet Union will also continue to plan and modernize its forces within the bounds of those agreements.

The table and format used for counting launcher levels raised the U.S. total for mid-1975 from 2,208 in Schlesinger's statement to 2,319 in Rumsfeld's. This upward change for the United States was effected by counting bombers differently. Bombers were described as "intercontinental" in Schlesinger's fiscal year 1976 statement and as "long-range" in Rumsfeld's. Schlesinger's statement projected 498 strategic bombers for the United States and 160 for the USSR. Rumsfeld's statement expanded the number of bombers counted for the United States by including bombers in research, development, testing, and evaluation (RDT&E), reserve, mothballs, and storage. For the USSR, the number included "all variants of the Bear, Bison, and Backfire (tankers, antisubmarine warfare (ASW), trainers, reconnaissance, etc.) wherever located."[18] By this change of definition for including bombers, the U.S. strategic launcher level--otherwise unchanged--was raised by 111. In the case of the USSR, the different approach added 170 bombers to their inventory, which, coupled with a larger ICBM and SLBM level than had been anticipated by Schlesinger, raised the Soviet total in Rumsfeld's statement to 2,660, compared to 2,450 in Schlesinger's.

The two tables reflecting these changes are shown on the next page. The effect of the definitional changes and the Soviet increases was to place the United States closer to the Vladivostok ceiling and the Soviet Union further above it. The Soviet margin over the United States in mid-1975 increased from 242 to 341. The intent may have been, on the one hand, to reduce any pressure that might develop for the United States to "build up" to the high Vladivostok ceiling and, on the other hand, to place additional pressure on the USSR to reduce its level as the disparity in launcher levels grew. The estimate of the Soviet launcher level in mid-1976 was 2,705, up 45 from mid-1975.[19]

Some Open Questions and Unrealized Hopes

Within a year of the SALT I Interim Agreement, the Soviet Union demonstrated a continuing emphasis and a surprising degree of growth in the very type of capability that the United States had, during nearly three years of SALT I, tried to convince the Soviet Union was destabilizing and which it was hoped had been significantly curbed by the Interim Agreement. These Soviet developments after SALT I are described in the next chapter, along with U.S. developments.

Given the direction and momentum of Soviet strategic offensive programs since SALT I, some concerns expressed and questions pointedly asked by the United States during the process of the SALT I negotiations remain pertinent and, unfortunately, unanswered. In 1971, for instance, the President's Foreign Policy Report asked questions and voiced concerns that remain troublesomely relevant in 1976:

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TABLE 2

U.S. AND USSR STRATEGIC FORCE LEVELS
MID-1975

	Schlesinger FY 1976 Statement			Rumsfeld FY 1977 Statement	
	U.S.	USSR		U.S.	USSR
ICBM Launchers	1,054	1,590		1,054	1,600
SLBM Launchers	656	700		656	730
Intercontinental Bombers	498	160	Long-Range Bombers		
	---	---	– Operational	497	160
			-- Other	112	170
Total Launchers	2,208	2,450		2,319	2,660
Difference Between U.S. and USSR Launcher Levels	242			341	
Amount Below or Above Vladivostok Ceiling of 2,400	-192	+50		-81	+260

> The design and growth of these [soviet] forces leads inescapably to profound questions concerning the threats we will face in the future, and the adequacy of our current strategic forces to meet the requirements of our security. Specifically:
>
> -- Does the Soviet Union simply seek a retaliatory capability, thus permitting the pursuit of meaningful limitations on strategic arms?
>
> -- Or does the Soviet Union seek forces which could attack and destroy vital elements of our retaliatory capability, thus requiring us to respond with additional programs of our own, involving another round of arms competition? . . .
>
> Moreover, the Soviet Union has been pursuing qualitative improvements which could threaten our retaliatory forces. With all the will in the world, we may be unable to secure limitations in the SALT discussions. . . . Soviet deployments make us uncertain whether the USSR has made a similar national commitment to strategic equilibrium.[20]

Similarly, the Report in 1972 stated:

> Last year there were uncertainties in our appraisal of Soviet strategic forces. Some of these uncertainties have now been removed, unfortunately not in a reassuring way. Others remain. At this time last year it appeared that the Soviets might have slowed and perhaps ceased deployment of land-based missiles. It was hoped that this was an indication of self-restraint. It was not. Since that time the overall Soviet strategic program has continued to move ahead. . . .
>
> In short, in virtually every category of strategic offensive and defensive weapons the Soviet Union has continued to improve its capability.
>
> These collective developments raise serious questions concerning Soviet objectives. The Soviet Union is continuing to create strategic capabilities beyond a level which by any reasonable standard already seems sufficient. It is therefore inevitable that we ask whether the Soviet Union seeks the numbers and types of forces needed to attack and destroy vital elements of our own strategic forces.[21]

U.S. paricipants in negotiations in SALT I hoped that the Soviet Union shared, or would come to share, the U.S. concern with strategic stability and see a mutual interest in parity or equality.[22] The question of whether the Soviets do share these goals remains unresolved.[23] The very concepts of "stability" and "stable balance" are alien to Soviet ideology and their view of interstate relations. Their commentary on strategic arms limitation seems driven by their general concept of "the correlation of forces," which is the world balance of military, economic, political, social, and ideological forces. This correlation is believed and/or stated by them to be inexorably shifting over the long-term in favor of the USSR vis-a-vis the United States.

It had also been hoped by some that one of the principal benefits to the United States of engaging in SALT would be learning about the strategic rationale and planned general force goal and mix of major Soviet programs. Such an understanding acquired through negotiations could have reduced some of the uncertainties against which the U.S. policy would be otherwise inclined to hedge and would have provided a basis for a dialogue about force developments of concern to both sides. Unfortunately, the dialogue between the SALT delegations has been evidently largely one-sided in terms of details, with the United States, in fact, even providing more of the assumptions about the number and nature of Soviet strategic weapons.[24] The failure of SALT to provide significantly improved U.S. understanding of the rationales and general goals of Soviet strategic programs is described in the public record. In 1971, more than a year after the negotiations had been underway, the President's Foreign Policy Report noted that "we have no explicit statement from the USSR as to the reasons for the leveling-off of the ICBM deployments, nor any guarantee that the apparent slow-down will continue."[25]

In early 1974, more than four years into SALT, Secretary Schlesinger's Posture Statement noted that ". . . the Soviets have not proved especially communicative about their programs and motives."[26]

CHAPTER III

STRATEGIC FORCE DEVELOPMENTS SINCE THE SALT I AGREEMENTS

Soviet Force Developments

General Emphasis

Since the SALT I agreements were reached in May, 1972, the Soviets, while substantially hardening some ICBM silos and improving SLBM systems to enhance survivability, have concentrated on replacement of three existing ICBMs with four new systems, three of which have demonstrated MIRV capability and a fourth with the necessary mechanism for dispensing MIRVs. Consequently, the estimated Soviet expenditures for intercontinental attack forces (ICBMs, SLBMs, and bombers) have grown substantially since the conclusion of the Interim Agreement in May, 1972. In 1975, the estimated Soviet annual dollar costs (excluding RDT&E) of intercontinental attack forces had exceeded the U.S. level by 100 percent. For the seventies, these costs have been 70 percent greater than the U.S. level. In the case of ICBMs, the estimated dollar costs of Soviet programs (excluding RDT&E) were seven times the U.S. level. Research and development (R&D) on further new and modified ICBMs is underway, and a new generation successor to part of the new ICBMs, tested and introduced in 1972-75, is expected to emerge in 1978-79.[1]

Strategic Offensive Systems

ICBMs. The four new ICBMs (SS-16, 17, 18, and 19) began flight tests in the fall and spring after the conclusion of SALT I. The breadth of the new Soviet ICBM effort in such a concurrent time frame was unprecedented. By 1976, three of the four new ICBMs had become operational, and by 1976, the fourth (the SS-16) was estimated to be deployable "at any time."[2] Although the development pace of a Soviet program for introducing MIRVed ICBMs had been previously overestimated (e.g., projected initial deployment in 1971 compared to actual in 1974) by U.S. intelligence, the scope and magnitude of the Soviet effort, revealed in the test program in 1973, had been seriously underestimated. Only two MIRVed ICBMs had been projected, compared with the three that also carried more MIRVs per missile than had been anticipated.[3]

All four of the new ICBMs employed post-boost vehicles that can operate to dispense MIRVs. On-board digital computers were introduced on the post-boost vehicles. These computers, coupled with other features, such as new guidance concepts and new, sharper reentry vehicles, facilitated accuracy improvements over the predecessor systems. Two of the new systems involved a very substantial increase in throw-weight, discussed below.

Successors to the SS-11: SS-17 and SS-19 -- Two, rather than only one, successors to the SS-11 were tested. Initially, the U.S. expected the Soviets would choose between them as competitors and deploy only one. However, both the SS-17 and SS-19 are being deployed in modified SS-11 silos. Both of these new systems manifested a surprisingly large growth in throw-weight over the capability of the SS-11. The 300-400 percent increase in demonstrated throw-weight has significantly undermined the U.S. attempt in SALT I to prevent replacement of the widely-deployed SS-11 "light" ICBM with a "modern heavy" successor. The two new systems also incorporated significant accuracy improvements. As a result, the potentially serious threat to the survivability of the Minuteman force is no longer posed solely by the "modern heavy" component of the Soviet ICBM force--the SS-9 and its successor, the SS-18--but also by two other systems that are replacing much of the "light" SS-11 force. Both the SS-19 force and the SS-17 (if the SS-17 is deployed in sufficient numbers) can pose independently a potentially serious threat to the survivability of the Minuteman force. Thus, the SALT I effort to constrain the growth of Soviet counterforce capabilities was not as successful as was hoped in May,1972.

The SS-17, first deployed in 1975, has been tested in two versions, one with a single large reentry vehicle and another with four MIRVs. The version with one reentry vehicle is expected to have a "very effective" capability to destroy hard targets. The SS-17 employs a "cold-launch" pop-up technique in which the booster ignites outside the silo, minimizing silo damage and enabling the silo to be reloaded. More importantly, however, this cold-launch technique allows for more efficient use of silo space to facilitate larger throw-weight ICBMs within the silo constraints of the SALT I agreements.

The SS-19 has been tested in one version, carrying six MIRVs. The system is launched with booster ignition in the silo, precluding prompt reloading. The SS-19 has had the most successful flight test program of the four new systems and was the first to begin deployment in late 1974, having been the first Soviet MIRVed system to be tested, beginning in April, 1973. The design features of the SS-19 indicated that "high accuracy" is a prime system objective.

Both the SS-19 and the SS-17 incorporate substantial accuracy improvements over their predecessor.[4] This is largely due to accuracy features assisted by on-board digital computers and to the sharper, more accurate reentry vehicles.[5] The hardness of Soviet SS-11 silos modified for the new missiles has been increased.

Successor to the SS-9: SS-18 — The continued build-up of the large, modern SS-9 force was, as indicated above, a major U.S. concern prior to and during SALT I. The Interim Agreement established a sub-ceiling of 288-313 for this class of missile which the United States regarded as having destabilizing counterforce potential.[6] SS-9 silos have been modified and hardened for the SS-18 replacements.

The SS-18 began flight tests in 1972. The new system is physically comparable in size to the SS-9, is also a liquid-propellant system, but uses a "cold" launch technique. The SS-18 has about "30 percent" more throw-weight than the SS-9. By late 1975, the SS-18 had been tested in three models. One model carries eight large MIRVs per launcher. Two other versions carry a very large single reentry vehicle. The later of these two models has both greater range and improved accuracy. Improved accuracy has been demonstrated with this system, particularly in the single reentry vehicle (RV) version, compared to the SS-9.[7]

Successor to the SS-13: SS-X-16 (the "X" indicates the system is still in the testing stage) -- A new system, the SS-X-16, has been developed as a solid-propellant follow-on to the small deployed force of SS-13s. The SS-X-16 has about twice the throw-weight of the SS-13. Although it has a mechanism for dispensing MIRVs, it has been tested through 1975 only with a single RV. A land-mobile, intermediate range (IRBM) version of the SS-X-16, the SS-X-20, is also being tested. The SS-X-20, which has been emphasized in recent testing, comprises the first two stages of the SS-X-16 and has been tested with a MIRVed payload.[8]

General Characteristics of the Four New Systems -- The general characteristics of these four new programs are shown in the following table.[9]

TABLE 3

CHARACTERISTICS OF NEW SOVIET ICBMS

ICBM	Warheads	Growth In Throw-weight Over Predecessor Missile	Initial Operational Capability
SS-17 (successor to SS-11)	4	"Four times"	1975
SS-19 (successor to SS-11)	6	"About 3 to 4 times"	1974
SS-18 (successor to SS-9)			
Model 1	1	"About 30%"	1974
Model 2	8	"	1975
Model 3	1	"	1975
SS-X-16 (successor to SS-13)	1	"About twice"	1976 (?)

In early 1974, the Defense Department anticipated the possibility that:

> If all three of the new and heavier missiles are deployed, throw-weight in the Soviet ICBM force will increase from the current 6-7 million pounds to an impressive 10-12 million pounds. This throw-weight, combined with increased accuracy and MIRVs, could give the Soviets on the order of 7,000 one-to-two megaton warheads in their ICBM force alone. This very impressive program appears to have three main objectives--expanded target coverage (particularly countermilitary) with MIRVs, improved pre-launch survivability with the new hard silo designs, and the attainment of a significant hard target kill capability. Given the warhead yield and CEP [circular error probable, i.e., accuracy] currently estimated for the MIRVed version of the SS-X-18, and looking at the fixed land-based portion of our strategic TRIAD[10] in isolation from other elements, a force of about 300 of these missiles (permitted under the Interim Agreement) could pose a serious threat to our ICBMs in their silos, even after those silos are upgraded. Moreover, it is more than likely that the MIRVed follow-on to the SS-11, whether it be the SS-X-17 or SS-X-19, will also achieve a respectable hard target kill capability during the early part of the next decade.[11]

The Defense Department has indicated that it would prefer to avoid a buildup of U.S. and Soviet counterforce capabilities through agreed constraints within SALT. Failing that, the Administration wants the United States to be able to take unilateral steps to offset the potentially major Soviet advantage in ICBM throw-weight.

The emphasis the Soviets have placed on ICBM force capability expansion is reflected in the estimate that in 1975 the dollar costs of these Soviet programs were seven times the U.S. level.[12] The growth since the Interim Agreement in Soviet expenditures for intercontinental attack forces is not expected to level off on a "new, higher plateau" until 1976-77. However, yet another generation of Soviet ICBMs is expected to emerge in 1978-79.13

SLBMs. In 1973, a new Soviet nuclear submarine for launching ballistic missiles, the Delta class, became operational. In 1976, a longer version of the Delta class, capable of carrying 16 instead of 12 missiles, is expected to become operational.[14]

The Delta class submarines carry a new SLBM, the SS-N-8, which is capable of delivering a single warhead to a range of 4,200 nautical miles (NM), exceeding by at least 1,600 NM the range of any currently deployed SLBM of the United States.[15] The accuracy of the SS-N-8 is "somewhat better" than that of the SS-N-6.

The Soviets have developed two new models of the SS-N-6 SLBM, carried by the Yankee-class submarine. Model 2 extends the range, and Model 3 both extends the range and carries multiple RVs to the extended range.

The Soviets have not yet demonstrated a depressed trajectory SLBM launch capability that would diminish the warning and escape time for U.S. strategic bombers.

In terms of SLBM deployment, the Soviets are thought to intend to expand their force up to the limit of 950 launchers allowed under the Interim Agreement, providing they dismantle the 210 old ICBMs (SS-7 and SS-8) in exchange.[17]

Soviet Strategic Bombers. The development of a new Soviet long-range bomber with extended range, speed, and altitude was first reported in 1970. Test flights of this new, swing-wing bomber, designated Backfire, were reported in 1972. The bomber was estimated to have entered serial production in 1973, and assignment to operational units was anticipated for the following year. The deployment of Backfire B, with greater range, was expected to proceed at a moderate pace. More than 50 Backfire B bombers are thought to have been produced and deployed with the Long-Range Aviation and Naval Aviation forces to date.[18]

Strategic Defensive Systems

ABM. In terms of deployment, the Soviet Union did not increase the number of launchers in the complex around Moscow from 64 to the 100 launchers allowed under the SALT I ABM Treaty and the 1974 protocol. In terms of R&D, however, the pace of Soviet efforts has accelerated since ratification of the SALT I Treaty. A follow-on, longer-range intercept system is thought to be under development.[19]

Strategic Air Defense. Since SALT I, the Soviet Union has continued to place its traditionally high priority on the development of strategic air defense. The tempo of research and development in that area has accelerated and devoted resources have increased. Since SALT I, the Soviet Union has continued to increase its inventory of low altitude SA-3 and high-altitude SA-5 surface-to-air missiles, and to add "new and more capable" manned interceptors. Some active SA-2 sites and older manned interceptors have been phased out. The total inventory of manned interceptor aircraft has continued to decline, but the total number of surface-to-air missiles on launchers has continued to grow since SALT I, reaching nearly 12,000 by mid-1975. Although the United States continues to expect the Soviet Union to develop a "look-down/shoot-down" fighter/interceptor capability, this capability has not yet appeared in Soviet forces.[20]

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U.S. Force Developments

Budgetary Trends and Emphasis

Since May, 1972, when negotiations for the SALT I agreements were concluded, the budget for U.S. strategic forces has declined significantly in real terms. In constant fiscal year 1977 dollars, the direct budget costs for strategic forces declined from $10.3 billion in fiscal year 1972 to $8.5 billion in fiscal year 1976. The principal cause of this decline was the substantial reduction in the strategic defensive forces budget, due to the sharp curtailment of the SAFEGUARD ABM program. In the case of strategic offensive forces, the direct costs have remained about the same: $6.8 billion in fiscal year 1972 and $6.9 billion in fiscal year 1976, in constant fiscal year 1977 dollars.

Beginning in fiscal year 1977, there will be an upward trend in total direct costs of strategic forces, primarily due to the continuation of the TRIDENT submarine and missile and the B-1 bomber programs. The fiscal year 1977 Defense Department Posture Statement projected that the total annual direct costs will grow from about $8.5 billion in fiscal year 1976 to about $11.5 billion in fiscal year 1981, in constant fiscal year 1977 dollars.[21]

Within a generally level budget for strategic offensive forces in the fiscal years 1973-76 period, the United States has concentrated about half of its effort upon improvement of the SLBM (TRIDENT and POSEIDON) and bomber (B-1 and B-52) components of the TRIAD. The budgetary emphasis has thereby been on measures that are generally regarded as stabilizing the deterrent relationship with the Soviets by improving the survivability and penetration capability of forces that are particularly suited for second-strike retaliatory missions.

Program Developments

Strategic Defensive

Since SALT I, the U.S. strategic defense programs have been considerably reoriented. The United States did not pursue the project of an ABM defense of the National Command Authority in the Washington, D.C. area, which was later precluded by the 1974 ABM protocol, and has unilaterally deactivated its one operational ABM site at Grand Forks, North Dakota, leaving only the Perimeter Acquisition Radar (PAR) in operation. In accord with a Congressional mandate, U.S. ABM research and development efforts have been reoriented towards exploration of and systems integration of subsystem technologies to anticipate and hedge against any Soviet breakthrough in ABM technology and thereby to discourage Soviet abrogation of the ABM Treaty. As a consequence of these measures and this developmental approach, U.S. testing of ABM interceptors has been greatly reduced.

Strategic Offensive

The Interim Agreement explicitly allowed major modernization and replacement of strategic offensive programs within the strategic missile launcher ceilings. After SALT I, the United States undertook both near-term improvements, most of which had already begun prior to May, 1972, and also longer-term improvements which would not become operational until the 1980-85 period.

Near-Term Improvements. After SALT I, the United States continued with several strategic offensive programs already underway.

Deployment of MIRVs -- In the near term, the deployment of MIRVs--production of which had been initially approved under Secretary McNamara--on 550 Minuteman III ICBMs and 496 Poseidon SLBMs continued. This deployment substantially increased the on-line strategic offensive warhead inventory of the United States during the 1972-77 period of the Interim Agreement. The U.S. lead over the Soviets in this static measure of capability, which was one of the qualitative leads that made the Soviet quantitative advantage in missile launchers acceptable to the United States under the terms of the Interim Agreement, grew initially and remained substantial.[22]

The Minuteman III deployment was completed in 1975, and the last of the converted Poseidon boats is expected to be deployed in 1978.[23] These MIRVed systems have relatively small yields and presently do not pose a more than modest threat to the survivability of hardened Soviet ICBMs.

Hardening of Minuteman ICBM Silos -- The United States continued the "silo upgrade" program to reduce the vulnerability of the 1,000 Minuteman ICBM silos by hardening them substantially to enhance their resistance to nuclear blast and radiation effects. The program is expected to be completed by the end of fiscal year 1979.[24] By enhancing survivability, this program contributes to stability in the deterrent relationship.

Modifications of B-52 -- Previously undertaken programs to modify the B-52 force were also continued. These principally involved improved survivability through accelerated satellite (inland) basing and decreased take-off time and increased ability to penetrate and destroy defended targets by introducing about 1,100 operational SRAMs (Short Range Attack Missiles) into the force of B-52 G&H (most recent) models (as well as into the small fleet of FB-111s).

Efforts were initiated after SALT I to extend the service life of 80 B-52D models by structural modification where fatigue-induced weaknesses had been identified. The B-52Ds are intended to be used primarily for conventional bombing missions that might otherwise divert later model (G&H) B-52s from strategic missions.

Longer-Term Modernization. The United States also continued major modernization programs which were allowed under the Interim Agreement.

TRIDENT -- The TRIDENT submarine and missile program was already in the development stage at the conclusion of SALT I. Under Secretary Laird, the TRIDENT program was sharply accelerated in the fiscal year 1973 budget request to advance the deployment availability to 1978, two to three years earlier than "the regular program."[25] The budget for TRIDENT accordingly rose sharply from the $140 million planned funding in fiscal year 1972 to a requested funding of $942 million for fiscal year 1973. The operational availability date of the TRIDENT submarine and TRIDENT I missile is currently estimated for fiscal year 1979. The program force goal has not been firmly established, but is presently at least 11 TRIDENT submarines with 24 missiles each, plus 160 TRIDENT I missiles placed ("backfitted") into 10 Poseidon submarines.

Although Secretary Schlesinger twice reduced the rate of the TRIDENT submarine procurement schedule, the TRIDENT program still accounted for nearly half the total program acquisition costs for major strategic offensive systems in the fiscal years 1973-76 period.

The rationale for the TRIDENT was based primarily on the need to develop a successor to the Polaris/Poseidon fleet, which was not expected to be useful after 20-25 years of operation, thus requiring replacement beginning in the early 1980s. The longer range of the TRIDENT missile will permit a vastly increased (at least four-fold) deployment area, thereby increasing survivability by greatly increasing the ASW task facing the Soviets. The missile accuracy goal of the TRIDENT I missile will be to retain, at its 4,000 NM range, the present accuracy achievable with the Poseidon's range of 2,500 NM. A TRIDENT II missile, with even longer range and increased payload, is in the early phase of development. The TRIDENT submarine is designed for improved quietness, mobility, and self-defense, thereby also enhancing survivability.

B-1 Bomber -- The decision to build some prototype B-1 aircraft was made in 1970. In contrast to the TRIDENT program, the development and test schedule was set to minimize concurrency between development and production, and thus allow a "fly before buy" approach to a deliberate, separate production decision. A decision is scheduled by at least early 1977 on production of the first three aircraft, based upon the test flight performance of three prototypes. The first B-1 would be scheduled for delivery to SAC (Strategic Air Command) for operations in fiscal year 1981. The force goal of the B-1 program has been tentatively stated to be 241 (plus the three prototypes).

The primary rationale for the B-1 was based on the need to replace the aging B-52 with a system both more survivable and more able to penetrate anticipated improvements in Soviet air defense. The G&H models of the B-52 are expected to be operationally available until the early 1990s. The B-1 has been designed to be less vulnerable to Soviet SLBM attack than the B-52 by hardening and faster take-off. The design of the B-1

also has a smaller radar signature, or cross section, to make more difficult detection and interception by anticipated improved Soviet air defense systems such as a "look-down/shoot-down" aircraft interceptor.

Advanced ICBM (M-X) – Beginning with the DoD Posture Statement of early 1974, the Defense Department has emphasized the need to develop a technology base for and to study system design and deployment modes for a successor to part of the Minuteman ICBM force. The heightened interest was generated by concern over the potentially major ICBM throw-weight advantage (10-12 million pounds, compared to 2 million for the United States) and the associated growing counterforce potential of new Soviet ICBMs against the U.S. force of 1,000 Minuteman ICBMs.

Secretary Schlesinger described the development pace of the M-X as "very deliberate" and "closely linked to future developments in Soviet strategic missile forces." The M-X was one of several strategic "R&D initiatives" proposed in the fiscal year 1975 budget to hedge against the uncertainty of "the manner in which the Soviets will attempt to exploit their throw-weight advantage."

In the present advanced development stage of the M-X, the performance characteristics of paramount interest are increased throw-weight (at least four times that of the Minuteman) and improved accuracy for destruction of hard targets. This interest is reflected in the emphasis placed upon advances in technology for propulsion and guidance.

The force goal and initial operational availability date for the M-X have not been determined within the Executive Branch. The development pace was adjusted by DoD in late 1974 to allow about two more years of development work, based upon a reappraisal of the initial operational problems of new Soviet ICBMs targeted against the Minuteman force and the effectiveness of the silo-hardening program undertaken to enhance and prolong the survivability of the existing Minuteman force. The timing of advanced development effort is expected to enable a decision to be made on whether to enter full-scale development in fiscal year 1978, "protecting" the option to deploy in the "mid-1980s." DoD has estimated that completion of development on the M-X will cost $3.9 billion.[26]

The deployment mode for an M-X would probably be mobile or moveable among multiple locations, given the concern with the increasing vulnerability of the fixed-site, silo-based Minuteman. Such a mobile configuration would be much more costly than placing the M-X in some or all of the existing 550 Minuteman III silos. However, the less expensive deployment mode would not overcome the basic destabilizing vulnerability of fixed silos in the 1980s and indeed could well aggravate the problem by constituting higher value, fixed targets for the Soviet Union to destroy. This is so because the "hard-target kill" capability of an M-X with highly accurate MIRVs might be seen by the USSR as being capable of destroying a large portion of the Soviet ICBM force, in which the Soviet Union, unlike the United States, has invested a large part (40-50 percent) of their

throw-weight. However, it should be recognized that the deployment of a mobile M-X to enhance ICBM survivability does not necessarily require the deployment of more accurate, higher-yield payloads to enhance the "hard-target kill" capability of the U.S. ICBM force against targets such as Soviet ICBM silos.

Strategic Cruise Missiles -- In the fiscal year 1974 budget submission, Secretary Richardson requested $15 million for conducting preliminary design studies on strategic cruise missiles, noting that "the Soviet Union has had an extensive program in this area and a wide variety of cruise missiles." An air-launched and sea-launched strategic cruise missile (ALCM and SLCM) development program has subsequently been undertaken, with an emphasis on some commonality of technology base and components such as engines and guidance.

If procured, both the SLCM and ALCM could achieve initial operational capability by about 1980. The completion of the research and development on these two strategic cruise missile programs has been estimated to cost about $1 billion, $400-$450 million for the ALCM and about $600 million for the strategic version of the SLCM.[27] Because of the lack of a detailed articulation of the requirement for these systems, considerable doubt remains concerning the need for them, particularly the strategic version of the SLCM. However, air-launched strategic cruise missiles may be desirable as a means of diversifying the bomber force, extending the useful life of the B-52 force, and thereby reducing the need and procurement level for new bombers. Some judge that, if the potential of strategic cruise missiles for high accuracy is proven, conventional warheads might make them an attractive substitute for some tactical nuclear weapons, particularly in Europe, on more vulnerable platforms. The question of whether and how to deal with cruise missiles within the Vladivostok accord's ceilings has become an important issue in SALT, along with similar questions about the Soviet Backfire bomber. The inherent difficulty, if not impossibility, of verifying range limitations on cruise missiles in a SALT agreement has led some to oppose an agreement restraining deployment or excluding cruise missiles on the basis of range.

Increased U.S. Capability for Hard-Target Destruction

In 1974, the Executive Branch proposed initiation of further development of options for increasing the hard-target destruction or "counterforce" potential of U.S. ICBMs and, eventually, SLBMs. It was stressed that measures for new guidance and warhead subsystems were to provide options for later, separate decisions on production and deployment, based upon the degree of restraint demonstrated by the USSR in deploying and refining the large, new ICBMs they had begun to test extensively in 1973. The need for U.S. counterforce hedges was explicitly tied to those Soviet programs that had major counterforce potential for destroying much of the hardened U.S. ICBM force and to the uncertainty about the outcome of SALT.[28]

The three measures that were proposed for increasing hard-target, counterforce capability were:

> Refine the existing guidance system for the Minuteman III.
>
> Initiate engineering development of a larger-yield warhead (MK-12A) that could be placed on the Minuteman III.
>
> Initiate advanced development of terminally-guided maneuvering reentry vehicles (MARV).

The development cost for refining the existing guidance system in the Minuteman III has been estimated to be $131 million. The refined guidance is expected to be incorporated into the missiles in fiscal year 1978. The development cost for the MK-12A reentry vehicle is expected to be $107 million. Production for use on the 550 Minuteman IIIs would cost about $335 million.[29] In the case of the terminal-guidance MARV technology program, costs have not been provided in the posture statements, and the development schedule has been lengthened so that the system would be available in the time frame of the M-X and TRIDENT II missile in the mid-1980s.[30]

These proposals were quite controversial. The rationale propounded by the Defense Department emphasized the determination to preserve the present stable balance with essential equivalence from being upset by the Soviets' acquiring a major advantage in counterforce capabilities by having an ICBM force with five to six times the throw-weight of the Minuteman force.[31] The posture statements for fiscal years 1975, 1976, and 1977 all stressed that it is preferable that both the United States and the Soviet Union avoid a buildup in counterforce capabilities.[32] Secretary Schlesinger argued that it was in the interest of both countries to reduce throw-weight.[33] He hoped the Soviet Union would be dissuaded in SALT from "fully exploiting its marked advantage in missile throw-weight."[34] However, if the Soviet buildup in counterforce potential continued, he argued that the United States must be able to pose a "comparable threat."[35] The posture statements repeatedly stated that the U.S. counterforce improvements would not provide the United States with a "disarming first-strike"[36] capability against the USSR.[37] This disavowal was generally consistent with the policy of not seeking a first-strike capability stated explicitly in the President's Foreign Policy Reports of 1970 through 1973.

A potential situation of special concern in the fiscal years 1975, 1976, and 1977 posture statements was the possibility that the Soviets, using only a portion of their ICBM force, would attack and destroy most of the U.S. ICBM force, which is the principal force element for flexible, limited response options. Such a Soviet attack would leave the United States with a greatly reduced flexibility in its surviving forces, while the Soviets retained "substantial flexibility" in their own as yet unused ICBMs as a basis for "exercising coercion and extracting concessions

without triggering the final holocaust."[38] Acknowledging that the probability of such a contingency may be low, the fiscal year 1977 Posture Statement states, ". . . it is a contingency which is bound to haunt the U.S. increasingly and is bound, therefore, to produce crisis and arms race instability unless we are able to deal with it."[39] It was argued that the U.S. counterforce R&D hedges would convince the Soviets of the futility of an attempt by them to acquire such an advantage or form of superiority they could exploit For coercion or diplomatic leverage.[40]

The Department's basic rationale for the R&D "hedges" was the same as that which underlies the emphasis on "essential equivalence": Major imbalances undermine deterrence of aggression and invite coercion.

The considerable criticism of the proposed counterforce options stressed the concern that the likelihood of nuclear war would be increased. It was argued that pursuing counterforce improvements, combined with U.S. planning for selective nuclear responses, would make the use of nuclear weapons less unthinkable and hence more likely. A Soviet strike limited to U.S. ICBMs was not regarded as plausible or in any event likely to avoid substantial civilian casualties and further escalation. Critics emphasized the instability of a "hair-trigger" situation in which both the United States and the USSR, aware of the large counterforce potential of the other, would in a crisis have an incentive to undertake a preemptive strike out of concern that otherwise its own ICBMs would be largely destroyed by the other side in a first strike. It was noted that the Soviets had a larger concentration of their strategic forces in ICBMs and thus might have more reason to be alarmed than the United States, with its more diversified TRIAD. It was also maintained that U.S. pursuit of R&D on yield and accuracy improvements, instead of inducing Soviet restraint, would provide an impetus to Soviet exploitation of the counterforce potential of their strategic systems. It was suggested that conservative Soviet military planners would assume the worst case of widespread U.S. deployment of improved counterforce payloads because high confidence verification of limited deployment would be impossible.

The refinement of Minuteman III guidance has been approved. In the case of the MK-12A, production could be started in fiscal year 1977.[41] In its initial fiscal year 1977 budget request, DoD deferred a production decision request for the MK-12A, "pending our continuing assessment of Soviet ICBM capabilities."[42] However, in April, 1976, the Executive Branch requested $317 million in fiscal year 1977 for procurement of 60 Minuteman III missiles and associated MK-12A warheads. The request for keeping the Minuteman production line open was made in light of continued deferral of a SALT II agreement based upon the Vladivostok accord.

Implications of Developments in Soviet and U.S. Strategic Forces Since SALT I

It is not a purpose of this paper to attempt to project the future of the strategic balance. Some implications relevant to U.S. policy and posture for strategic forces can, however, be drawn from the developments in Soviet and U.S. strategic forces since SALT I in mid-1972.

Reinforced Concern with Vulnerability of Minuteman

The surprising scope and momentum of Soviet ICBM force modernization evident within a year of the signing of the Interim Agreement has reinforced the U.S. concern with the future vulnerability of the 1,000 Minuteman ICBMs in the U.S. force structure. By the end of the 1970s by pessimistic estimates and by the early to mid-1980s by more optimistic estimates, the Soviets are expected to be able to destroy a high percentage of the Minuteman force.[43]

Given the surprising magnitude of the Soviet programs of the very type the United States had tried to persuade the Soviets in SALT I were destabilizing, the U.S. response in the 1973-76 period has been quite restrained compared to the U.S. responses in the mid- to late 1960s to the Soviet ABM program and deployments of the large Soviet SS-9 ICBM. For example, in the earlier period, the United States accelerated the development of MIRV (Minuteman III and Poseidon) primarily to overcome a possible wide-scale Soviet ABM deployment that some thought was presaged by development of a system in the Moscow area. In contrast, in the 1973-76 period, the United States has not accelerated a major strategic program and, in particular, has slowed somewhat the pace of developing an advanced ICBM that could be less vulnerable than Minuteman if it were deployed in a semi-mobile mode. Rather than take action based upon a "greater than expected threat," as it had in the late 1960s in accelerating a U.S. MIRV program, the Defense Department reappraised upward the expected effectiveness of the program to harden (upgrade) the silos for Minuteman and took into account the complicated operational problems initially facing the Soviets in planning an attack against the Minuteman force. The record then, particularly compared to the pre-SALT period of the mid- to late 1960s, is one of U.S. restraint.

The United States had urged Soviet restraint in developing such a counterforce potential, argued that it was in the interest of both sides to avoid such a buildup, offered restraint in U.S. deployments, but initiated R&D options for a U.S. response to the Soviet developments if restraint were not forthcoming. The United States, through upcoming choices about increased counterforce capability in the existing Minuteman force and mobile M-X advanced ICBM, could begin to pose a substantially increased threat to the Soviet ICBM force.

No Disarming Strike Potential Foreseen

Because of the continuing relative invulnerability of SLBM forces of both the United States and the Soviet Union and because of the realistic operational degradations likely to be encountered in an actual nuclear exchange, neither the Soviet Union nor the United States is expected to have a capability to launch a first strike that would be disarming in the sense of preventing the other side from retaliating against the population of the other nation. As Secretary Schlesinger said in early 1974:[44]

> Neither the USSR nor the United States has, or can hope to have, a capability to launch a disarming first strike against the other, since each of us possesses, and will possess for the foreseeable future, a devastating second-strike capability against the other. This almost certainly will deter the deliberate initiation of a nuclear attack against cities, for it would bring inevitable retaliatory destruction to the initiator. Thus, this basic deterrent remains intact.

Nonetheless, for those who consider that being able to deter and respond to a limited Soviet attack is a high priority mission requirement for U.S. strategic forces, the future vulnerability of the Minuteman is a matter of special concern. This is because it is this element of the TRIAD which they judge is best suited to deter and respond selectively to a limited nuclear attack.

Soviet Emphasis on Means to Reduce Effectiveness of Retaliatory Forces

In strategic defensive forces, the Soviet Union has accelerated the pace of both its ABM and strategic air defense programs since SALT I, in sharp contrast to the curtailment of development and deployment by the United States. Because of the extensive deployment of MIRVs on the Poseidon and Minuteman III forces, the United States has already hedged substantially against a potential Soviet ABM system. The development of further techniques, such as the MARV (maneuvering reentry vehicle) for optional deployment on the TRIDENT I missile, for countering advanced Soviet ABM systems will extend that hedge into the future.

In the case of Soviet strategic air defense, the continuing Soviet emphasis upon that traditionally high priority area has been demonstrated by the increased tempo of their research and development and the raising of their deployed surface-to-air launcher inventory by 2,000--from 10,000 to 12,000--since SALT I.[45] In light of this continued Soviet emphasis, the U.S. strategic bomber force can reasonably be expected to face significant improvements in Soviet air defense that could degrade the effectiveness of the B-52. Again, the United States has under development

both the B-1 and air-launched cruise missiles as complementary or alternative means of coping with such Soviet improvements.

As in the case of strategic offensive forces, there has not been the restrained momentum in Soviet defensive programs that had been hoped for as a result of SALT I. The accelerated pace of Soviet research and development suggests that--again contrary to the expectations of some at the time the ABM Treaty was concluded--the Soviets do not share the U.S. view that it is destabilizing to emphasize forces that threaten the survivability and effectiveness of the retaliatory forces of the other side. It is perhaps this pessimistic implication for prospects of restrained competition that is more a matter of near-term troublesome concern than the military effectiveness of any particular force development on the Soviet side.

CHAPTER IV

FUTURE BUDGET IMPACT OF SALT

Introduction

This chapter discusses the limited effect of SALT to date, prospects for major savings, and limited impact of a possible breakdown or "failure" of SALT.

The ABM Treaty of SALT I in 1972 did enable the United States to avoid the costs of a wide-scale ABM deployment.* However, SALT has not directly enabled the United States to go beyond cost avoidance to major savings. This is the case principally because SALT, including the Vladivostok accord and the SALT II agreement it suggests, has not constrained some of the most important threat areas that generate a need for some substantial modernization of U.S. strategic forces.

Substantial savings from SALT are thus not likely to come from avoiding the need for some expensive modernization. Small, mutual reductions of about 10-15 percent (e.g., 240-360 launchers) would have very little near-term budget impact. Even negotiated major reductions (e.g., 25-33 percent) in U.S. force levels would not have a comparable impact on the U.S. budget for strategic offensive forces because the annual recurring

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* Attributing some "costs" and "savings" to SALT is unavoidably a debatable exercise. What is a savings from one viewpoint may be regarded as illusory from another viewpoint that stresses the "cost" of achieving a questionable "savings." For example, it should be noted that there was considerable opposition to even a relatively small-scale U.S. ABM deployment, and it cannot be firmly assumed that the United States would have proceeded with a wide-scale deployment if SALT I had not limited the United States and the Soviet Union to two and then one site. It should also be recalled that a principal rationale for the initial U.S. deployment was the bargaining leverage which U.S. negotiators judged U.S. ABM program momentum had in inducing the Soviets to restrain their ABM program and to reverse their opposition to some limits on strategic offensive systems. In the view of some, then, the cost of a limited U.S. ABM deployment, later terminated, was a cost attributable to SALT. SALT has provided an atmosphere in which a reduced pace for some strategic programs, particularly the TRIDENT submarine construction schedule, has been more acceptable. However, cost and technical risk would have been important concerns, with or without SALT. Keeping the production line open for the Minuteman III has been related to continued delay and uncertainty about the results of SALT II,

costs of some existing deployed systems are relatively quite low. This is particularly true with the 1,000 Minuteman ICBMs which account for nearly 45 percent of the U.S. strategic offensive launcher level, but which have annual recurring costs for their deployment of about $300 million, or only 3 percent of the initial request for fiscal year 1977 for the direct budget costs of U.S. strategic offensive forces.

Substantial force level reductions could provide a realistic basis for substantial savings in the longer term (fiscal year 1980 and beyond). Such longer-term savings would result from the lower force procurement goals and associated lower force operating costs for the next generation of U.S. strategic forces.

Because the United States has already undertaken substantial modernization programs against important potential Soviet threats not constrained by SALT, a breakdown of SALT would not necessarily mean that the United States would have to contemplate major new programs not already underway.

If the negotiations resumed within a year or so, and Soviet restraint was indicated, then over half of the five-year costs of a U.S. response to a breakdown could be avoided because most of the procurement costs from accelerated programs would come in the later years.

SALT and Modernization of the TRIAD

U.S. strategic forces are composed of three elements, or a TRIAD: bombers, ICBMs, and SLBMs. Major modernization efforts in U.S. strategic forces now underway or under active consideration--the B-1 bomber, TRIDENT submarine and missile, and M-X (advanced ICBM)--are designed or premised on the basis of already evident or anticipated Soviet force development in areas not constrained by SALT: air defense (B-1 and/or air-launched cruise missiles), antisubmarine warfare (TRIDENT), and ICBM throw-weight (M-X, advanced ICBM). In any event, the aging of the Polaris/Poseidon fleet and the B-52 force would require some replacement in the early to mid-1980s.

Soviet air defense has been an area of traditionally very high priority resource allocation. It has not been constrained by SALT. Indeed, since SALT I the Soviets have accelerated the pace of research and development for strategic air defense, and it is reasonable to expect further improvements in this area. The B-1 and/or air-launched cruise missiles, along with continuing modifications of the B-52, are related to such developments and possible use of short-warning attacks by Soviet SLBMs.

In the case of the TRIDENT missile and submarine, there has been less discussion in the public record of the threat probabilities against which it is designed, but possible improvement in Soviet antisubmarine warfare capabilities--an important area also unconstrained by SALT-- is a major basis for the TRIDENT program.

SALT has not succeeded in significantly constraining the growth of Soviet ICBM throw-weight as a basis for a growing counterforce threat to the survivability of the Minuteman force. This essentially unconstrained threat is a principal basis for the United States' developing an option to deploy a less vulnerable, more capable ICBM in the 1980s. In a sense, then, if a semi-mobile M-X to reduce vulnerability is undertaken at a cost of $20-$30 billion in fiscal year 1977 dollars, that will be a cost of a shortcoming or "failure" of SALT against a principal objective articulated for SALT II in May, 1972:

> ". . . to constrain and reduce on a long-term basis threats to the survivability of our respective strategic retaliatory forces."

Given the present policy of maintaining essential equivalence in the force balance with the Soviet Union and the commitment to a TRIAD, SALT cannot reasonably be expected to avoid the need for some substantial, expensive modernization programs for U.S. strategic forces.

The fact of SALT's not constraining significantly some key areas that could threaten the survivability and effectiveness of U.S. strategic forces and the aging of some major existing components does not, of course, necessarily mean that a particular advanced design such as the TRIDENT or B-1 is required. However, these considerations do mean that if SALT is to enable significant savings in the U.S. strategic forces budget, it would most likely be through negotiated mutual force level reductions, not by obviating significant force modernization.

Savings Through Force Level Reductions

Policy Background

The United States has been pursuing a policy of maintaining essential equivalence in the strategic balance, preferably by negotiated mutual constraints and reductions, but, failing these, by unilateral improvements in U.S forces, if necessary. The United States has been committed to force levels approximately equal to those of the Soviet Union. Given this policy, U.S. force level reductions would presumably be phased with a verifiable counterpart Soviet effort.

Range of Approaches

The budgetary impact of force level reductions would vary significantly, depending on the time frame in which they were to be implemented, the total launcher reduction, and the choice of existing or future systems to be reduced.

Near-term savings could come from phasing out some existing systems in the inventory and/or reducing the rate of production for some major new systems such as the B-1 or TRIDENT. Reducing the force goal of the B-1 or TRIDENT would not have any significant impact before 1983 unless the production rate were also lowered. It should be noted that, depending upon the systems chosen for reductions, lowering aggregate force levels would not necessarily involve a commensurate or net reduction of important threats, if some critical force areas remain unconstrained.

The annual recurring costs of some deployed existing strategic offensive systems are a relatively very small part of the budget for strategic forces. Consequently, even substantial reductions in launchers would have a disproportionately small impact on the budget for strategic forces. This is particularly true of the Minuteman ICBM force. The annual recurring cost of the SLBM and bomber components of the TRIAD are higher as a potential source of savings, but these are the systems for assured retaliation that the United States might prefer least to reduce substantially because of the stabilizing aspect of invulnerability in the case of SLBMs and the unsuitability for first strike in the case of bombers.

A near-term reduction in the aggregate force level applied against existing operational systems would probably be applied against older systems in the inventory, such as the 80 B-52 D models, the 10 first generation Polaris submarines, and the 54 Titan II ICBMs. As an illustrative example of budgetary impact, the following reduction might be assumed, with the estimated annual recurring savtngs to be for the first year after the phase-out was completed.

TABLE 4

ILLUSTRATIVE EXAMPLE OF NEAR-TERM BUDGETARY IMPACT OF REDUCTIONS IN OLDER SYSTEMS

	Number of Launchers in Inventory	Number of Launchers Phased Out Within Two Years	Estimated Annual Recurring Savings Resulting from Completed Phase-Out (Fiscal Year 1977$)
Bombers	80 B-52 Ds	80 B-52 Ds	$150 million
ICBMs	54 Titan IIs	54 Titan IIs	$55 million
SLBMs	160 Polaris SLBMs (10 Submarines)	80 Polaris SLBMs (5 Submarines)	$90 million

This example illustrates the relatively quite small budgetary impact of a significant reduction in existing launchers. While the launcher reduction is 9 percent (214 out of 2,319 in mid-1976, as indicated in the DoD Annual Report for FY 1977), the budget reduction would be only about 3-4 percent of the direct costs of strategic offensive forces in the initial fiscal year 1977 budget request for $8.6 billion.

If an acceptable mutual near-term reduction were more extensive, the disproportionately small budgetary impact would remain. For example, if mutual reductions enabled the United States to phase out all 450 Minuteman IIs, the annual recurring savings in fiscal year 1977 dollars in the first year, after the completion of the phase-out, could be about $135 million. Such a reduction in the ICBM force would alone reduce the aggregate U.S. level by nearly 20 percent, but would only represent 1.5-2.0 percent of the fiscal year 1977 budget request for strategic offensive forces.

Given the high cost of strategic force modernization programs, SALT could enable substantial longer-term savings if it lowered the aggregate force level and thereby enabled reducing the number of B-1, TRIDENT, and M-X systems ultimately produced. For example, in the case of the B-1, a reduction from 241 to 160 would reduce procurement costs by about $3 billion in fiscal year 1977 dollars. If the presently undefined TRIDENT force goal were assumed to be 27 boats with 648 SLBMs, to replace the 41 Polaris/Poseidon fleet of 656 SLBMs, then a force goal reduction of one-third to 18 boats would reduce the TRIDENT submarine missile procurement cost by $9 billion. However, these substantial savings would not begin to have major annual impact until the mid-1980s, unless the rate of production were also reduced. For example, in the case of the B-1, if the rate of production were reduced from a maximum of four per month to three per month, then, beginning in fiscal year 1979, annual savings of $400-$500 million (in constant fiscal year 1977 dollars) would result. If the production rate were not reduced, the production run would end sooner, but no savings from a one-third reduction in the program force goal would occur until fiscal year 1983. Reducing the TRIDENT procurement schedule would be complicated by the aging of the existing SLBM force of Polaris and Poseidon submarines. These submarines will begin to require replacement in the early 1980s, compared to the later model B-52s which are expected to remain operationally available until the early 1990s. This situation makes a reduction in the TRIDENT production rate less feasible in the near term, even with a reduced force goal for the SLBM force.

Budget Implications of a Breakdown of SALT

Expectations about SALT differ, and, therefore, what is judged a success by some may be seen by others as a clear, if unacknowledged, failure. There is more than one way in which the failure or breakdown

of SALT could occur or develop.* The actual circumstances of a breakdown and associated atmosphere in U.S.-Soviet relations would affect the general direction, priorities, and pace of the U.S. response. For example, if the atmosphere were charged with a sense of being misled or with concern over an emboldened Soviet Union, then some proposed U.S. responses might be related more to demonstrating resolve and projecting program momentum than to a clearly defined need based upon actual developments in Soviet strategic forces. If there were reason to hope that the acknowledged deadlock or suspension of SALT was not an irrevocable situation, then the United States might seek to demonstrate the ability to produce a less satisfactory situation (from the Soviet standpoint) than restraints on the Soviets via arms control. Making renewed Soviet interest in SALT a preferable alternative to intensified competition might be a major U.S. objective.

Given the lead times involved in Soviet as well as U.S. programs, it is not expected that the strategic balance could be radically altered in a few months or a year. Thus, a SALT "failure" would probably not reflect a serious, sudden reappraisal of the current or short-term strategic balance.

Under its policy of maintaining an essential equivalence in the strategic balance, the United States has already undertaken steps to enable it to improve the survivability and effectiveness of its forces. The TRIDENT, B-1, and M-X programs have been pursued within SALT, and a failure of SALT, therefore, might not require major new programs not already contemplated for availability in the early to mid-1980s.

Given the increased momentum of Soviet strategic offensive programs after SALT I's conclusion in May, 1972, it seems unlikely that the Soviets might choose to do more in ICBM and SLBM modernization than they already have, and are expected to continue within the broad constraints of the Vladivostok accord. The Soviets might begin additional deployment of ICBMs and/or SLBMs beyond the Vladivostok ceiling of 2,400. However, as early as 1971, the Soviet emphasis in ICBM programs turned toward qualitative replacement rather than continued large deployment rates. Continuation of qualitative replacement of systems and introduction of new models of new systems might well continue to be the Soviet practice if SALT broke

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* It should be noted that "failure" usually is taken to mean failure to reach an agreement, but failure can also be related to the substance of an agreement in terms of unconstrained threats and verification problems. In terms of time pressures relating to a judgment of deadlock or breakdown, it should be noted that the 1972 Interim Agreement on Strategic Offensive Systems will expire in October, 1977. The United States is on record with the position that a failure to negotiate a more comprehensive follow-on agreement on strategic offensive weapons could lead to a U.S. withdrawal from the ABM Treaty of 1972. The tying of the two limitation efforts has been a fundamental tenet of the U.S. position since the SALT negotiations began in 1969.

down. Perhaps more likely than a quantitative "breakout" in launchers would be for the Soviets to go beyond the Vladivostok 1,320 ceiling for MIRVed launchers.

Budget Implications of a Hypothetical Soviet Violation of the ABM Treaty

It is hard to visualize ways in which the Soviets would do more in strategic offensive programs than their already high-priority resource allocation. Because of this, it is perhaps more likely that developments in Soviet defensive forces could induce a breaking off of the talks and major changes in U.S. programs.

An estimate of likely developments is not intended here. Instead, as a way of helping to bound the impact of a breakdown of SALT and for purposes of estimating the budgetary impact of a hypothetical SALT "breakdown," it is assumed that the United States would conclude that there is convincing evidence of a Soviet effort to deploy some advanced anti-ballistic missile systems prohibited by the ABM Treaty of SALT I. (It should be recalled that the United States has already extensively hedged against an extensive Soviet ABM deployment by deploying 1,650 MIRVs in 550 Minuteman IIIs and 496 Poseidon SLBMs capable of carrying 14 MIRVs per launcher.) The United States would take the formal steps to begin withdrawal from the treaty and the Interim Agreement. The United States would be assumed to undertake the following budgetary actions in addition to the baseline force:

- To improve the ability to penetrate expanded and improved Soviet ABM defenses:
  - Continue Minuteman III production beyond the 60 missiles requested for fiscal year 1977, to enable building up from the present 550 to 800 launchers;
  - Procure an Evader MARV as an anti-ABM warhead for deployment on 100 TRIDENT I missiles by the early 1980s;
  - Accelerate development of a semi-mobile M-X to enable an early 1980s initial operational capability, with a force goal of 200 by 1985, to provide a larger throw-weight missile enabling more RVs per missile to penetrate an improved Soviet ABM system (and reduce U.S. ICBM vulnerability);
  - Accelerate the air-launched cruise missile (ALCM) program, with a force goal of 1,000 by 1983, to complicate the Soviet strategic defensive task.

-- To demonstrate a heightened U.S. interest in ABM operational experience and technological base:

  - Reactivate the one SAFEGUARD site;
  - Increase testing and the pace of ABM-related R&D.

The DoD budget impact in constant fiscal year 1977 dollars could grow from about $800 million in fiscal year 1977 to $3.3 billion in fiscal year 1981. Of the total estimated cost of about $10 billion, in fiscal year 1977 dollars, over fiscal years 1977-81, about 60 percent would be incurred in the last two years. Thus, if the negotiations resumed and Soviet restraint had been induced, most of the cost of the "breakdown" could be avoided. Against the projected defense budget request for fiscal years 1977-81, the impact could grow from less than 1 percent in fiscal year 1977 to 2-3 percent in fiscal year 1981.

Different assumptions about the nature of a SALT breakdown and a U.S. response would, of course, lead to different budgetary impacts. The costs could be greater if the Minuteman production line had to be reopened rather than continued, and if acceleration of the TRIDENT or B-1 procurement were deemed appropriate. Additional costs would also be incurred if general purpose forces were included in a "SALT supplemental" budget request,

NOTES

Introduction

1. John F. Kennedy, Public Papers of the Presidents of the United States, Commencement address at American University (June 10, 1963), pp. 459-64.

2. Military Implications of the Treaty on the Limitations of Anti-Ballistic Missile Systems and the Interim Agreement on Limitation of Strategic Offensive Arms, Hearings before the Senate Committee on Armed Services, 92 Cong. 2 sess. (1972) (hereafter referred to as SASC 1972), pp. 117, 122.

Chapter I

1. U.S. Foreign Policy for the 1970s: A New Strategy for Peace, Report to the Congress by President Richard Nixon, Feb. 18, 1970 (hereafter referred to as FPR 1970), p. 125; U.S. Foreign Policy for the 1970s: Building for Peace, Report to the Congress by President Richard Nixon, Feb. 25, 1971 (hereafter referred to as FPR 1971), pp. 168, 176, 190; U.S. Foreign Policy for the 1970s: The Emerging Structure of Peace, Report to the Congress by President Richard Nixon, Feb. 9, 1972 (hereafter referred to as FPR 1972), pp. 159, 174; SASC 1972, p. 119.

2. FPR 1971, pp. 190, 194; FPR 1972, p. 174; U.S. Policy for the 1970s: Shaping a Durable Peace, Report to the Congress by President Richard Nixon, May 3, 1973 (hereafter referred to as FPR 1973), pp. 194-95; SASC 1972, pp. 99-100.

3. Toward the conclusion of SALT I, the U.S. delegation made a unilateral statement (May 9, 1972) which included a stress on the tie between continuation of the ABM Treaty with success in establishing more complete limitations on strategic offensive weapons. (U.S. Arms Control and Disarmament Agency, Arms Control and Disarmament Agreements, Texts and History of Negotiations (February 1975) (hereafter referred to as ACDA 1975). See appendix for full text of Ambassador Smith's statement.) See also SASC 1972, p. 109, Kissinger quote: ". . . the temporary agreement is linked to the continuation of the defensive treaty, because we have made it clear that the continuation of the defensive treaty depends importantly on there being a follow-on agreement on offensive weapons."

4. FPR 1971, p. 194.

5. FPR 1972, pp. 174, 21, 176; FPR 1973, pp. 30, 199; SASC 1972, pp. 98, 119.

6. FPR 1970, p. 121; FPR 1971, pp. 168-69, 176-77, 192 (". . . Soviet deployments make us uncertain whether the USSR has made a similar national commitment to strategic equilibrium."); FPR 1972, p. 159.

7. ACDA 1975, p. 128; FPR 1972, pp. 174-76; SASC 1972, p. 109.

8. FPR 1970, p. 143; FPR 1971, pp. 156, 160, 162, 167, 171, 175; FPR 1972, pp. 12, 155, 162, 171, 176; FPR 1973, pp. 194-99.

9. See appendix for text of agreements and associated statements.

10. The prohibition on conversion was in the text of the agreement. However, in the interpretative statements, the Soviets did not agree on the definition of a "heavy" ICBM.

11. SASC 1972, p. 118.

12. SASC 1972, pp. 98, 102, 106, 107, 120-22.

13. SASC 1972, p. 121; Secretary of State Henry Kissinger, two addresses: "The Permanent Challenge of Peace: U.S. Policy Toward the Soviet Union," Feb. 3, 1976, Department of State Bulletin, Vol. 74, No. 1913, p. 207; and "Foreign Policy and National Security," March 22, 1976, Department of State Bulletin, Vol. 74, No. 1290, p. 462.

14. SASC 1972, p. 128. See also p. 121.

15. SASC 1972, p. 100. See also p. 396.

16. The Military Implications of the Strategic Arms Limitation Talks Agreement, Hearings before the House Committee on Armed Services, 92 Cong. 2 sess. (1972), p. 15092.

17. SASC 1972, p. 109 (". . . I think it is reasonable to assume that they will develop a MIRV during the freeze period."). See also pp. 115, 128, 132.

18. SASC 1972, Dr. Kissinger, p. 123 ("The Soviet Union has proved that it can best compete in sheer numbers. This is an area which is limited by the agreement."). See also FPR 1973, p. 201.

Chapter II

1. ACDA 1975, p. 146.

2. SASC 1972, pp. 286-87, 333, 343, 393, 395.

3. Public Law 92-448. See also FPR 1971, p. 171; FPR 1972, p. 160; FPR 1973, p. 185.

4. In the President's Foreign Policy Reports prior to 1973, the terms "equality" or "essential equivalence" were not used. Instead, the terms "equitable agreement" or "equitable balance" were used (e.g., FPR 1971, pp. 189, 195, 198). It was emphasized, however, that to endure or remain acceptable, an arms control agreement must be "equitable" (e.g., FPR 1971, p. 198, FPR 1972, pp. 162, 171-72, 176. FPR 1973 used the term "equal security" along with "essential equivalence," pp. 195, 202-204).

5. FPR 1973, pp. 204, 199 (". . . The purpose of SALT, in our view, was to break the momentum of unconstrained growth in strategic systems."), 181.

6. FPR 1973, p. 203; SASC 1972, pp. 121, 286-87.

7. FPR 1973, pp. 201-202. See also Dr. Kissinger's statement of June, 1972, SASC 1972, pp. 122-23, 125.

8. SASC 1972, pp. 133, 135. See also FPR 1970, pp. 111-12, 123-24; FPR 1971, p. 174; FPR 1972, p. 181.

9. Dr. Henry Kissinger, SASC 1972, pp. 123, 133, 137.

10. The Washington Summit: General Secretary Brezhnev's Visit to the United States, June 18-25, 1973, Department of State (1973), p. 17.

11. White House Press Release, No. 511, Nov. 25, 1974.

12. Joint Statement on Strategic Offensive Arms, issued at Vladivostok, Nov. 24, 1974. At an earlier summit in Moscow in July, 1974, it was agreed that a follow-on agreement "should cover the period until 1985."

13. Weekly Compilation of Presidential Documents. Vol. 10, Issue 48, p. 1418. Secretary Kissinger, at his news conference of December 7, 1974, stated that: "Throughout SALT II (Strategic Arms Limitation Talks) negotiations, our negotiators strove for the following objectives:

-- One, to achieve a ceiling on the number of total delivery vehicles.
-- Second, to achieve a ceiling on the number of MIRVed delivery vehicles.
-- Third, to have these ceilings equal.
-- Fourth, not to count forward-based systems.
-- Fifth, not to count the British and French nuclear forces.
– Sixth, not to give compensation to any other geographic factors.

> – And then we sought other technical objectives, such as freedom to mix, which means that each side should be free to compose its strategic forces substantially according to its best judgment." (Emphasis added.)

See also, Annual Defense Department Report. FY 1976 and FY 197T (Feb. 5, 1975) (hereafter referred to as Schlesinger FY 1976), p. II-8.

14. Annual Defense Department Report, FY 1977 (Jan. 27, 1976) (hereafter referred to as Rumsfeld FY 1977), p. 8.

15. Schlesinger FY 1976, p. II-8. See also p. I-9.

16. Schlesinger FY 1976, p. II-19.

17. Rumsfeld FY 1977, p. 74.

18. Rumsfeld FY 1977, p. 54.

19. Rumsfeld FY 1977, p. 54.

20. FPR 1971, pp. 168, 177, 192.

21. FPR 1972, p. 159.

22. Paul Nitze, "SALT: The Strategic Balance Between Hope and Skepticism," Foreign Policy, No. 17 (Winter 1974-75), pp. 136-56.

23. The Vladivostok Accord: Implications to U.S. Security, Arms Control, and World Peace, Hearings before the House Subcommittee on International Security and Scientific Affairs, 94 Cong. 1 sess. (1975), statement by Dr. James P. Wade, Jr., p. 148 (". . . The Soviets have never in the SALT talks discussed in serious detail the concept of strategic stability between the two sides.").

24. See Dr. Wade's testimony, p. 144 above. SASC 1972, p. 128.

25. FPR, 1971, p. 177.

26. Annual Defense Department Report. FY 1975 (March 4, 1974) (hereafter referred to as Schlesinger FY 1975), p. 29.

Chapter III

1. Central Intelligence Agency, A Dollar Comparison of Soviet and U.S. Defense Activities, 1965-1975 (Feb., 1976) (hereafter referred to as A Dollar Comparison), pp. 4, 6; Allocation of Resources in the Soviet Union and China - 1975, Hearings before the Subcommittee on

Priorities and Economy in Government of the Joint Economic Committee, 94 Cong. 1 sess. (1975) (hereafter referred to as JEC 1975), Part I, pp. 32-33.

2. Rumsfeld FY 1977, p. 65.

3. JEC 1975, pp. 97-98.

4. Schlesinger FY 1976, pp. II-12-13.

5. Schlesinger FY 1975, pp. 45-46.

6. Schlesinger FY 1975, pp. 45-46.

7. Schlesinger FY 1975, pp. 45-46; Schlesinger FY 1976, pp. II-12-13; General George S. Brown, United States Military Posture for FY 1977 (unclassified) (January 20, 1976) (hereafter referred to as Brown FY 1977), pp. 34-35; Department of Defense Appropriations, Fiscal Year 1975, Hearings before the Senate Committee on Appropriations, 93 Cong. 2 sess. (1974) (hereafter referred to as SAC 1974), Part 1, p. 49.

8. Schlesinger FY 1975, pp. 45-46; Schlesinger FY 1976, p. II-13; Rumsfeld FY 1977, p. 67.

9. Brown FY 1977, p. 33; Schlesinger FY 1975, pp. 45-46; Schlesinger FY 1976, pp. II-12-14.

10. See Chapter IV for discussion of the TRIAD.

11. Schlesinger FY 1975, pp. 46-47.

12. A Dollar Comparison, pp. 4-5.

13. JEC 1975, statement of Director of Central Intelligence Agency, William E. Colby, pp. 29-33.

14. Brown FY 1977, pp. 37-38.

15. The U.S. extended-range SLBM (with a MIRV), the TRIDENT I, will not be available until 1979.

16. Annual Defense Department Report, FY 1974 (April 10, 1973) (hereafter referred to as Richardson FY 1974), p. 32.

17. Rumsfeld FY 1977, p. 69; Schlesinger FY 1975, p. 47; Schlesinger FY 1976, p. II-15.

18. Schlesinger FY 1975, p. 47; Schlesinger FY 1976, p. II-15-16; Rumsfeld FY 1977, p. 69; Annual Defense Department Report. FY 1971 (Feb. 20, 1970) (hereafter referred to as Laird FY 1971), p, 36.

19. Department of Defense Appropriations, Fiscal Year 1976, Hearings before the Senate Committee on Appropriations, 94 Cong. 1 sess. (1975), Part 5, p. 859; Schlesinger FY 1976, p. II-16; Richardson FY 1974, p. 33.

20. Schlesinger FY 1975, pp. 45, 48; Schlesinger FY 1976, p. II-16; Rumsfeld FY 1977, p. 70; Brown FY 1977, pp. 44-45, 48; A Dollar Comparison, p. 5.

21. Rumsfeld FY 1977, p. 52.

22. Brown FY 1977, p. 48. The U.S. lead over the Soviets in mid-1976 in on-line warheads was estimated at 2½:1, 8,900 compared to 3,500 (Rumsfeld FY 1977, p. 54). In mid-1972 the United States had force loadings of 5,700 compared to an estimated 2,500 for the USSR (Annual Defense Department Report. FY 1973 (Feb. 8, 1972) (hereafter referred to as Laird FY 1973), p. 41.).

23. Schlesinger FY 1976, p. II-26; Rumsfeld FY 1977, p. 82.

24. Rumsfeld FY 1977, pp. 79-81. The Command Data Buffer System to enable more rapid retargeting of Minuteman III was also continued.

25. Laird FY 1973, pp. 68-69.

26. Fiscal Year 1977 Authorization for Military Procurement. Research and Development, and Active Duty, Selected Reserve, and Civilian Personnel Strengths, Hearings before the Senate Committee on Armed Services, 94 Cong. 2 sess. (1976), Part 6, p. 6373; Fiscal Year 1976 and July-September 1976 Transition Period Authorization for Military Procurement. Research and Development, and Active Duty, Selected Reserve, and Civilian Personnel Strengths, Hearings before the Senate Committee on Armed Services, 94 Cong. 1 sess. (1975) (hereafter referred to as SASC 1975), Part 10, p. 5231; Schlesinger FY 1975, pp. 6-7, 56; Schlesinger FY 1976, pp. I-16, 17, II-9-10, 27-29; Rumsfeld FY 1977, pp. 62, 81.

27. Richardson FY 1974, p. 57. See also Secretary Laird's proposal for "accelerated study" of a submarine-launched cruise missile at the time the SALT I agreements were presented for Congressional approval in mid-1972 (SASC 1972, pp. 17, 141); SASC 1975, Part 10, pp. 5197, 5213-14.

28. Schlesinger FY 1976, p. I-13.

29. DoD costs only, excluding Energy Research and Development Administration costs.

30. Schlesinger FY 1976, pp. II-25-26, 29-30; Rumsfeld FY 1977, p. 80.

31. Schlesinger FY 1976, pp. I-16; II-27.

32. Schlesinger FY 1975, pp. 42, 44.

33. Fiscal Year 1975 Authorization for Military Procurement, Research and Development, and Active Duty, Selected Reserve, and Civilian Personnel Strengths, Hearings before the Senate Committee on Armed Services, 93 Cong. 2 sess. (1974) (hereafter referred to as SASC 1974), Part 1, p. 206.

34. SASC 1974, Part 1, pp. 286, 289, 280-81.

35. Schlesinger FY 1975, p. 42.

36. Secretary Schlesinger defined a "disarming first-strike capability" in the following statement to the Senate Committee on Armed Services in 1974:

> A "disarming first-strike capability" implies a capacity to attack and reduce an opponent's strategic offensive forces to the point where he could no longer penetrate the initiator's defenses in sufficient numbers to cause unacceptable damage to population and industry.

37. Schlesinger FY 1975, pp. 4-6, 40, 42, 44-45; Schlesinger FY 1976, pp. I-10, 13, 15-16, II-3-5, 9; Rumsfeld FY 1977, pp. 80, 18, 59.

38. Schlesinger FY 1975, p. 42; Schlesinger FY 1976, pp. II-4, 9.

39. Rumsfeld FY 1977, p. 61.

40. Schlesinger FY 1975, p. 30; SASC 1974, pp. 280-81, 286, 289.

41. Schlesinger FY 1976, p. II-25.

42. Rumsfeld FY 1977, p. 80; Authorizing Appropriations for Fiscal Year 1977 for Military Procurement, Research and Development, and Active Duty, Selected Reserve, and Civilian Personnel Strengths and for Other Purposes, S. Rept. 878, 94 Cong. 2 sess. (1976), p. 25.

43. Department of Defense Appropriations for 1977, Hearings Before a Subcommittee of the House Committee on Appropriations, 94 Cong. 2 sess. (1976), Part 1, p. 560.

44. Schlesinger FY 1975, pp. 4-6, 40, 42, 44-45; Schlesinger FY 1976, pp. I-10, 13, 15-16, II-3-5, 9; Rumsfeld FY 1977, pp. 18, 59, 80; SAC 1974, Part 1, p. 45

45. Richardson FY 1974, p. 33; Brown FY 1977, pp. 44, 48.

Chapter IV

1. Defense Department Annual Report. FY 1972 (March 1, 1971), p. 46; Laird FY 1973, p. 39; FPR 1971, p. 169.

APPENDIX A

Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems

Signed at Moscow May 26, 1972

The United States of America and the Union of Soviet Socialist Republics, hereinafter referred to as the Parties,

Proceeding from the premise that nuclear war would have devastating consequences for all mankind,

Considering that effective measures to limit anti-ballistic missile systems would be a substantial factor in curbing the race in strategic offensive arms and would lead to a decrease in the risk of outbreak of war involving nuclear weapons,

Proceeding from the premise that the limitation of anti-ballistic missile systems, as well as certain agreed measures with respect to the limitation of strategic offensive arms, would contribute to the creation of more favorable conditions for further negotiations on limiting strategic arms,

Mindful of their obligations under Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons,

Declaring their intention to achieve at the earliest possible date the cessation of the nuclear arms race and to take effective measures toward reductions in strategic arms, nuclear disarmament, and general and complete disarmament,

Desiring to contribute to the relaxation of international tension and the strengthening of trust between States,

Have agreed as follows:

Article I

1. Bach Party undertakes to limit anti-ballistic missile (ABM) systems and to adopt other measures in accordance with the provisions of this Treaty.

2. Each Party undertakes not to deploy ABM systems for a defense of the territory of its country and not to provide a base for such a defense, and not to deploy ABM systems for defense of an individual region except as provided for in Article III of this Treaty.

Article II

1. For the purpose of this Treaty an ABM system is a system to counter strategic ballistic missiles or their elements in flight trajectory, currently consisting of:

(a) ABM interceptor missiles, which are interceptor missiles constructed and deployed for an ABM role, or of a type tested in an ABM mode;

(b) ABM launchers, which are launchers constructed and deployed for launching ABM interceptor missiles; and

(c) ABM radars, which are radars constructed and deployed for an ABM role, or of a type tested in an ABM mode.

2. The ABM system components listed in paragraph 1 of this Article include those which are:

(a) operational;
(b) under construction;
(c) undergoing testing;
(d) undergoing overhaul, repair or conversion; or
(e) mothballed.

Article III

Each Party undertakes not to deploy ABM systems or their components except that:

(a) within one ABM system deployment area having a radius of one hundred and fifty kilometers and centered on the Party's national capital, a Party may deploy: (1) no more than one hundred ABM launchers and no more than one hundred ABM interceptor missiles at launch sites, and (2) ABM radars within no more than six ABM radar complexes, the area of each complex being circular and having a diameter of no more than three kilometers; and

(b) within one ABM system deployment area having a radius of one hundred and fifty kilometers and containing IOBM silo launchers, a Party may deploy: (1) no more than one hundred ABM launchers and no more than one hundred ABM interceptor missiles at launch sites, (2) two large phased-array ABM radars comparable in potential to corresponding ABM radars operational or under construction on the date of signature of the Treaty in an ABM system deployment area containing ICBM silo launchers, and (3) no more than eighteen ABM radars each having a potential less than the potential of the smaller of the above-mentioned two large phased-array ABM radars.

Article IV

The limitations provided for in Article III shall not apply to ABM systems or their components used for development or testing, and located within current or additionally agreed test ranges. Each Party may have no more than a total of fifteen ABM launchers at test ranges.

Article V

1. Each Party undertakes not to develop, test, or deploy ABM systems or components which are sea-based, air-based, space-based, or mobile land-based.

2. Each Party undertakes not to develop, test, or deploy ABM launchers for launching more than one ABM interceptor missile at a time from each launcher, nor to modify deployed launchers to provide them with such a capability, nor to develop, test, or deploy automatic or semi-automatic or other similar systems for rapid reload of ABM launchers.

Article VI

To enhance assurance of the effectiveness of the limitations on ABM systems and their components provided by this Treaty, each Party undertakes:

(a) not to give missiles, launchers, or radars, other than ABM interceptor

missiles, ABM launchers, or ABM radars, capabilities to counter strategic ballistic missiles or their elements in flight trajectory, and not to test them in an ABM mode; and

(b) not to deploy in the future radars for early warning of strategic ballistic missile attack except at locations along the periphery of its national territory and oriented outward.

Article VII

Subject to the provisions of this Treaty, modernization and replacement of ABM systems or their components may be carried out.

Article VIII

ABM systems or their components in excess of the numbers or outside the areas specified in this Treaty, as well as ABM systems or their components prohibited by this Treaty, shall be destroyed or dismantled under agreed procedures within the shortest possible agreed period of time.

Article IX

To assure the viability and effectiveness of this Treaty, each Party undertakes not to transfer to other States, and not to deploy outside its national territory, ABM systems or their components limited toy this Treaty.

Article X

Bach Party undertakes not to assume any international obligations which would conflict with this Treaty.

Article XI

The Parties undertake to continue active negotiations for limitations on strategic offensive arms.

Article XII

1. For the purpose of providing assurance of compliance with the provisions of this Treaty, each Party shall use national technical means of verification at its disposal in a manner consistent with generally recognized principles of international law.

2. Each Party undertakes not to interfere with the national technical means of verification of the other Party operating in accordance with paragraph 1 of this Article.

3. Each Party undertakes not to use deliberate concealment measures which impede verification by national technical means of compliance with the provisions of this Treaty. This obligation shall not require changes in current construction, assembly, conversion, or overhaul practices.

Article XIII

1. To promote the objectives and implementation of the provisions of this Treaty, the Parties shall establish promptly a Standing Consultative Commission, within the framework of which they will:

(a) consider questions concerning compliance with the obligations assumed and related situations which may be considered ambiguous;

(b) provide on a voluntary basis such information as either Party considers necessary to assure confidence in compliance with the obligations assumed;

(c) consider questions involving unintended interference with national technical means of verification;

(d) consider possible changes in the strategic situation which have a bearing on the provisions of this Treaty;

(e) agree upon procedures and dates for destruction or dismantling of ABM systems or their components in cases provided for by the provisions of this Treaty;

(f) consider, as appropriate, possible proposals for further increasing the viability of this Treaty, including proposals for amendments in accordance with the provisions of this Treaty;

(g) consider, as appropriate, proposals for further measures aimed at limiting strategic arms.

2. The Parties through consultation shall establish, and may amend as appropriate, Regulations for the Standing Consultative Commission governing procedures, composition and other relevant matters.

Article XIV

1. Each Party may propose amendments to this Treaty. Agreed amendments shall enter into force in accordance with the procedures governing the entry into force of this Treaty.

2. Five years after entry into force of this Treaty, and at five-year intervals thereafter, the Parties shall together conduct a review of this Treaty.

Article XV

1. This Treaty shall be of unlimited duration.

2. Each Party shall, in exercising its national sovereignty, have the right to withdraw from this Treaty if it decides that extraordinary events related to the subject matter of this Treaty have jeopardized its supreme interests. It shall give notice of its decision to the other Party six months prior to withdrawal from the Treaty. Such notice shall include a statement of the extraordinary events the notifying Party regards as having jeopardized its supreme interests.

Article XVI

1. This Treaty shall be subject to ratification in accordance with the constitutional procedures of each Party. The Treaty shall enter into force on the day of the exchange of instruments of ratification.

2. This Treaty shall be registered pursuant to Article 102 of the Charter of the United Nations.

Done at Moscow on May 26, 1972, in two copies, each in the English and Russian languages, both texts being equally authentic.

FOR THE UNITED STATES OF AMERICA

President of the United States of America

FOR THE UNION OF SOVIET SOCIALIST REPUBLICS

General Secretary of the Central Committee of the CPSU

Interim Agreement Between the United States of America and the Union of Soviet Socialist Republics on Certain Measures With Respect to the Limitation of Strategic Offensive Arms

Signed at Moscow May 26, 1972

The United States of America and the Union of Soviet Socialist Republics, hereinafter referred to as the Parties,

Convinced that the Treaty on the Limitation of Anti-Ballistic Missile Systems and this Interim Agreement on Certain Measures with Respect to the Limitation of Strategic Offensive Arms will contribute to the creation of more favorable conditions for active negotiations on limiting strategic arms as well as to the relaxation of international tension and the strengthening of trust between States,

Taking into account the relationship between strategic offensive and defensive arms,

Mindful of their obligations under Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons,

Have agreed as follows:

Article I

The Parties undertake not to start construction of additional fixed land-based intercontinental ballistic missile (ICBM) launchers after July 1, 1972.

Article II

The Parties undertake not to convert land-based launchers for light ICBMs, or for ICBMs of older types deployed prior to 1964, into land-based launchers for heavy ICBMs of types deployed after that time.

Article III

The Parties undertake to limit submarine-launched ballistic missile (SLBM) launchers and modern ballistic missile submarines to the numbers operational and under construction on the date of signature of this Interim Agreement, and in addition to launchers and submarines constructed under procedures established by the Parties as replacements for an equal number of ICBM launchers of older types deployed prior to 1964 or for launchers on older submarines.

Article IV

Subject to the provisions of this Interim Agreement, modernization and replacement of strategic offensive ballistic missiles and launchers covered by this Interim Agreement may be undertaken.

Article V

1. For the purpose of providing assurance of compliance with the provisions of this Interim Agreement, each Party shall use national technical means of verification at its disposal in a manner consistent with generally recognized principles of international law.

2. Each Party undertakes not to interfere with the national technical means of verification of the other Party operating in accordance with paragraph 1 of this Article.

3. Each Party undertakes not to use deliberate concealment measures which impede verification by national technical means of compliance with the provisions of this Interim Agreement. This obligation shall not require changes in current construction, assembly, conversion, or overhaul practices.

Article VI

To promote the objectives and implementation of the provisions of this Interim Agreement, the Parties shall use the Standing Consultative Commission established under Article XIII of the Treaty on the Limitation of Anti-Ballistic Missile Systems in accordance with the provisions of that Article.

Article VII

The Parties undertake to continue active negotiations for limitations on strategic offensive arms. The obligations provided for in this interim Agreement shall not prejudice the scope or terms of the limitations on strategic offensive arms which may be worked out in the course of further negotiations.

Article VIII

1. This Interim Agreement shall enter into force upon exchange or written notices of acceptance by each Party, which exchange shall take place simultaneously with the exchange of instruments of ratification of the Treaty on the Limitation of Anti-Ballistic Missile Systems.

2. This Interim Agreement shall remain in force for a period of five years unless replaced earlier by an agreement on more complete measures limiting strategic offensive arms. It is the objective of the Parties to conduct active follow-on negotiations with the aim of concluding such an agreement as soon as possible.

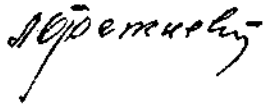
3. Each Party shall, in exercising its national sovereignty, have the right to withdraw from this Interim Agreement if it decides that extraordinary events related to the subject matter of this Interim Agreement have jeopardized its supreme interests. It shall give notice of its decision to the other Party six months prior to withdrawal from this Interim Agreement. Such notice shall include a statement of the extraordinary events the notifying Party regards as having jeopardized its supreme interests.

Done at Moscow on May 26, 1972, in two copies, each in the English and Russian languages, both texts being equally authentic.

FOB THE UNITED STATES OF AMERICA

The President of the United States

FOR THE UNION OF SOVIET SOCIALIST REPUBLICS



General Secretary of the Central Committee of the CPSU

PROTOCOL

To the Interim Agreement Between the United States of America and the Union of Soviet Socialist Republics on Certain Measures With Respect to the Limitation of Strategic Offensive Arms

Signed at Moscow May 26, 1972

The United States of America and the Union of Soviet Socialist Republics, hereinafter referred to as the Parties,

Having agreed on certain limitations relating to submarine-launched ballistic missile launchers and modern ballistic missile submarines, and to replacement procedures, in the Interim Agreement,

Have agreed as follows:

The Parties understand that, under Article III of the Interim Agreement, for the period during which that Agreement remains in force:

The U.S. may have no more than 710 ballistic missile launchers on submarines (SLBMs) and no more than 44 modern ballistic missile submarines. The Soviet Union may have no more than 950 ballistic missile launchers on submarines and no more than 62 modern ballistic missile submarines.

Additional ballistic missile launchers on submarines up to the above-mentioned levels, in the U.S. — over 656 ballistic missile launchers on nuclear-powered submarines, and in the U.S.S.R. — over 740 ballistic missile launchers on nuclear-powered submarines, operational and under construction, may become operational as replacements for equal numbers of ballistic missile launchers of older types deployed prior to 1964 or of ballistic missile launchers on older submarines.

The deployment of modern SLBMs on any submarine, regardless of type, will be counted against the total level of SLBMs permitted for the U.S. and the U.S.S.R.

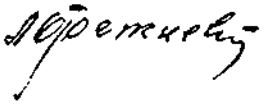
This Protocol shall be considered an integral part of the Interim Agreement.

Done at Moscow this 26th day of May, 1972.

FOR THE UNITED STATES OF AMERICA

The President of the
United States of America

FOR THE UNION OF SOVIET SOCIALIST REPUBLICS



The General Secretary of the
Central Committee of the CPSU

SALT: AGREED INTERPRETATIONS AND UNILATERAL STATEMENTS

1. AGREED INTERPRETATIONS

(a) *Initialed Statements.*—The texts of the statements set out below were agreed upon and initialed by the Heads of the Delegations on May 26, 1972.

ABM TREATY

[A]

The Parties understand that, in addition to the ABM radars which may be deployed in accordance with subparagraph (a) of Article III of the Treaty, those non-phased-array ABM radars operational on the date of signature of the Treaty within the ABM system deployment area for defense of the national capital may be retained.

[B]

The Parties understand that the potential (the product of mean emitted power in watts and antenna area in square meters) of the smaller of the two large phased-array ABM radars referred to in subparagraph (b) of Article III of the Treaty is considered for purposes of the Treaty to be three million.

[C]

The Parties understand that the center of the ABM system deployment area centered on the national capital and the center of the ABM system deployment area containing ICBM silo launchers for each Party shall be separated by no less than thirteen hundred kilometers.

[D]

The Parties agree not to deploy phased-array radars having a potential (the product of mean emitted power in watts and antenna area in square meters) exceeding three million, except as provided for in Articles III, IV and VI of the Treaty, or except for the purposes of tracking objects in outer space or for use as national technical means of verification.

[E]

In order to insure fulfillment of the obligation not to deploy ABM systems and their components except as provided in Article III of the Treaty, the Parties agree that in the event ABM systems based on other physical principles and including components capable of substituting for ABM interceptor missiles, ABM launchers, or ABM radars are created in the future, specific limitations on such systems and their components would be subject to discussion in accordance with Article XIII and agreement in accordance with Article XIV of the Treaty.

[F]

The Parties understand that Article V of the Treaty includes obligations not to develop, test or deploy ABM interceptor missiles for the delivery by each ABM interceptor missile of more than one independently guided warhead.

[G]

The Parties understand that Article IX of the Treaty includes the obligation of the US and the USSR not to provide to other States technical descriptions

or blueprints specially worked out for the construction of ABM systems and their components limited by the Treaty.

INTERIM AGREEMENT

[H]

The parties understand that land-based ICBM launchers referred to in the Interim Agreement are understood to be launchers for strategic ballistic missiles capable of ranges in excess of the shortest distance between the northeastern border of the continental U.S. and the northwestern border of the continental USSR.

[I]

The Parties understand that fixed land-based ICBM launchers under active construction as of the date of signature of the Interim Agreement may be completed.

[J]

The Parties understand that in the process of modernization and replacement the dimensions of land-based ICBM silo launchers will not be significantly increased.

[K]

The Parties understand that dismantling or destruction of ICBM launchers of older types deployed prior to 1964 and ballistic missile launchers on older submarines being replaced by new SLBM launchers on modern submarines will be initiated at the time of the beginning of sea trials of a replacement submarine, and will be completed in the shortest possible agreed period of time. Such dismantling or destruction, and timely notification thereof, will be accomplished under procedures to be agreed in the Standing Consultative Commission.

[L]

The Parties understand that during the period of the Interim Agreement there shall be no significant increase in the number of ICBM or SLBM test and training launchers, or in the number of such launchers for modern land-based heavy ICBMs. The Parties further understand that construction or conversion of ICBM launchers at test ranges shall be undertaken only for purposes of testing and training.

(6) *Common Understandings.* — Common understanding of the Parties on the following matters was reached during the negotiations :

A. INCREASE IN ICBM SILO DIMENSIONS

Ambassador Smith made the following statement on May 26, 1972:

> The Parties agree that the term "significantly increased" means that an increase will not be greater than 10–15 percent of the present dimensions of land-based ICBM silo launchers.

Minister Semenov replied that this statement corresponded to the Soviet understanding.

B. LOCATION OF ICBM DEFENSES

The U.S. Delegation made the following statement on May 26, 1972:

> Article III of the ABM Treaty provides for each side one ABM system deployment area centered on its national capital and one ABM system

deployment area containing ICBM silo launchers. The two sides have registered agreement on the following statement: "The Parties understand that the center of the ABM system deployment area centered on the national capital and the center of the ABM system deployment area containing ICBM silo launchers for each Party shall be separated by no less than thirteen hundred kilometers." In this connection, the U.S. side notes that its ABM system deployment area for defense of ICBM silo launchers, located west of the Mississippi River, will be centered in the Grand Forks ICBM silo launcher deployment area. (See Initialed Statement [C].)

C. ABM TEST RANGES

The U.S. Delegation made the following statement on April 26, 1972:

Article IV of the ABM Treaty provides that "the limitations provided for in Article III shall not apply to ABM systems or their components used for development or testing, and located within current or additionally agreed test ranges." We believe it would be useful to assure that there is no misunderstanding as to current ABM test ranges. It is our understanding that ABM test ranges encompass the area within which ABM components are located for test purposes. The current U.S. ABM test ranges are at White Sands, New Mexico, and at Kwajalein Atoll, and the current Soviet ABM test range is near Sary Shagan in Kazakhstan. We consider that non-phased array radars of types used for range safety or instrumentation purposes may be located outside of ABM test ranges. We interpret the reference in Article IV to "additionally agreed test ranges" to mean that ABM components will not be located at any other test ranges without prior agreement between our Governments that there will be such additional ABM test ranges.

On May 5, 1972, the Soviet Delegation stated that there was a common understanding on what ABM test ranges were, that the use of the types of non-ABM radars for range safety or instrumentation was not limited under the Treaty, that the reference in Article IV to "additionally agreed" test ranges was sufficiently clear, and that national means permitted identifying current test ranges.

D. MOBILE ABM SYSTEMS

On January 28, 1972, the U.S. Delegation made the following statement:

Article V(1) of the Joint Draft Text of the ABM Treaty includes an undertaking not to develop, test, or deploy mobile land-based ABM systems and their components. On May 5, 1971, the U.S. side indicated that, in its view, a prohibition on deployment of mobile ABM systems and components would rule out the deployment of ABM launchers and radars which were not permanent fixed types. At that time, we asked for the Soviet view of this interpretation. Does the Soviet side agree with the U.S. side's interpretation put forward on May 5, 1971?

On April 13, 1972, the Soviet Delegation said there is a general common understanding on this matter.

E. STANDING CONSULTATIVE COMMISSION

Ambassador Smith made the following statement on May 22, 1972:

The United States proposes that the sides agree that, with regard to initial implementation of the ABM Treaty's Article XIII on the Standing

Consultative Commission (SCC) and of the consultation Articles to the Interim Agreement on offensive arms and the Accidents Agreement,* agreement establishing the SCC will be worked out early in the follow-on SALT negotiations; until that is completed, the following arrangements will prevail: when SALT is in session, any consultation desired by either side under these Articles can be carried out by the two SALT Delegations; when SALT is not in session, *ad hoc* arrangements for any desired consultations under these Articles may be made through diplomatic channels.

Minister Semenov replied that, on an *ad referendum* basis, he could agree that the U.S. statement corresponded to the Soviet understanding.

F. STANDSTILL

On May 6, 1972, Minister Semenov made the following statement:

In an effort to accommodate the wishes of the U.S. side, the Soviet Delegation is prepared to proceed on the basis that the two sides will in fact observe the obligations of both the Interim Agreement and the ABM Treaty beginning from the date of signature of these two documents.

In reply, the U.S. Delegation made the following statement on May 20, 1972:

The U.S. agrees in principle with the Soviet statement made on May 6 concerning observance of obligations beginning from date of signature but we would like to make clear our understanding that this means that, pending ratification and acceptance, neither side would take any action prohibited by the agreements after they had entered into force. This understanding would continue to apply in the absence of notification by either signatory of its intention not to proceed with ratification or approval.

The Soviet Delegation indicated agreement with the U.S. statement.

2. UNILATERAL STATEMENTS

(a) The following noteworthy unilateral statements were made during the negotiations by the United States Delegation:

A. WITHDRAWAL PROM THE ABM TREATY

On May 9, 1972, Ambassador Smith made the following statement:

The U.S. Delegation has stressed the importance the U.S. Government attaches to achieving agreement on more complete limitations on strategic offensive arms, following agreement on an ABM Treaty and on an Interim Agreement on certain measures with respect to the limitation of strategic offensive arms. The U.S. Delegation believes that an objective of the follow-on negotiations should be to constrain and reduce on a long-term basis threats to the survivability of our respective strategic retaliatory forces. The USSR Delegation has also indicated that the objectives of SALT would remain unfulfilled without the achievement of an agreement providing for more complete limitations on strategic offensive arms. Both sides recognize that the initial agreements would be steps toward the achievement of more com-

*See Article 7 of Agreement to Reduce the Risk of Outbreak of Nuclear War Between the United States of America and the Union of Soviet Socialist Republics, signed Sept. 30, 1971.

plete limitations on strategic arms. If an agreement providing for more complete strategic offensive arms limitations were not achieved within five years, U.S. supreme interests could be jeopardized. Should that occur, it would constitute a basis for withdrawal from the ABM Treaty. The U.S. does not wish to see such a situation occur, nor do we believe that the USSR does. It is because we wish to prevent such a situation that we emphasize the importance the U.S. Government attaches to achievement of more complete limitations on strategic offensive arms. The U.S. Executive will inform the Congress, in connection with Congressional consideration of the ABM Treaty and the Interim Agreement, of this statement of the U.S. position.

B. LAND-MOBILE ICBM LAUNCHERS

The U.S. Delegation made the following statement on May 20, 1972:

In connection with the important subject of land-mobile ICBM launchers, in the interest of concluding the Interim Agreement the U.S. Delegation now withdraws its proposal that Article I or an agreed statement explicitly prohibit the deployment of mobile land-based ICBM launchers. I have been instructed to inform you that, while agreeing to defer the question of limitation of operational land-mobile IOBM launchers to the subsequent negotiations on more complete limitations on strategic offensive arms, the U.S. would consider the deployment of operational land-mobile ICBM launchers during the period of the Interim Agreement as inconsistent with the objectives of that Agreement.

C. COVERED FACILITIES

The U.S. Delegation made the following statement on May 26, 1972:

I wish to emphasize the importance that the United States attaches to the provisions of Article V, including in particular their application to fitting out or berthing submarines.

D. "HEAVY" ICBM'S

The U.S. Delegation made the following statement on May 26, 1972:

The U.S. Delegation regrets that the Soviet Delegation has not been willing to agree on a common definition of a heavy missile. Under these circumstances, the U.S. Delegation believes it necessary to state the following: The United States would consider any ICBM having a volume significantly greater than that of the largest light ICBM now operational on either side to be a heavy ICBM. The U.S. proceeds on the premise that the Soviet side will give due account to this consideration.

E. TESTED IN ABM MODE

On April 7, 1972, the U.S. Delegation made the following statement:

Article II of the Joint Text Draft uses the term "tested in an ABM mode," in defining ABM components, and Article VI includes certain obligations concerning such testing. We believe that the sides should have a common understanding of this phrase. First, we would note that the testing provisions of the ABM Treaty are intended to apply to testing which occurs after the date of signature of the Treaty, and not to any testing which may have occurred in the past. Next, we would amplify the remarks we have made on this subject during the previous Helsinki phase by setting forth the objectives

which govern the U.S. view on the subject, namely, while prohibiting testing of non-ABM components for ABM purposes: not to prevent testing of ABM components, and not to prevent testing of non-ABM components for non-ABM purposes. To clarify our Interpretation of "tested in an ABM mode," we note that we would consider a launcher, missile or radar to be "tested in an ABM mode" if, for example, any of the following events occur: (1) a launcher is used to launch an ABM interceptor missile, (2) an interceptor missile is flight tested against a target vehicle which has a flight trajectory with characteristics of a strategic ballistic missile flight trajectory, or is flight tested in conjunction with the test of an ABM interceptor missile or an ABM radar at the same test range, or is flight tested to an altitude inconsistent with interception of targets against which air defenses are deployed, (3) a radar makes measurements on a cooperative target vehicle of the kind referred to in item (2) above during the reentry portion of its trajectory or makes measurements in conjunction with the test of an ABM interceptor missile or an ABM radar at the same test range. Radars used for purposes such as range safety or instrumentation would be exempt from application of these criteria.

F. NO-TRANSFER ARTICLE OF ABM TREATY

On April 18, 1972, the U.S. Delegation made the following statement:

In regard to this Article [IX], I have a brief and I believe self-explanatory statement to make. The U.S. side wishes to make clear that the provisions of this Article do not set a precedent for whatever provision may be considered for a Treaty on Limiting Strategic Offensive Arms. The question of transfer of strategic offensive arms is a far more complex issue, which may require a different solution.

G. NO INCREASE IN DEFENSE OF EARLY WARNING RADARS

On July 28, 1970, the U.S. Delegation made the following statement:

Since Hen House radars [Soviet ballistic missile early warning radars] can detect and track ballistic missile warheads at great distances, they have a significant ABM potential. Accordingly, the U.S. would regard any increase in the defenses of such radars by surface-to-air missiles as inconsistent with an agreement.

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(b) The following noteworthy unilateral statement was made by the Delegation of the U.S.S.R. and is shown here with the U.S. reply:

On May 17, 1972, Minister Semenov made the following unilateral "Statement of the Soviet Side":

Taking into account that modern ballistic missile submarines are presently in the possession of not only the U.S., but also of its NATO allies, the Soviet Union agrees that for the period of effectiveness of the Interim 'Freeze' Agreement the U.S. and its NATO allies have up to 50 such submarines with a total of up to 800 ballistic missile launchers thereon (including 41 U.S. submarines with 656 ballistic missile launchers). However, if during the period of effectiveness of the Agreement U.S. allies! in NATO should increase the number of their modern submarines to exceed the numbers of submarines they would have operational or under construction on the date of signature

of the Agreement, the Soviet Union will have the right to a corresponding increase in the number of its submarines. In the opinion of the Soviet side, the solution of the question of modern ballistic missile submarines provided for in the Interim Agreement only partially compensates for the strategic imbalance in the deployment of the nuclear-powered missile submarines of the USSR and the U.S. Therefore, the Soviet side believes that this whole question, and above all the question of liquidating the American missile submarine bases outside the U.S., will be appropriately resolved in the course of follow-on negotiations.

On May 24, Ambassador Smith made the following reply to Minister Semenov:

The United States side has studied the statement made by the Soviet side" of May 17 concerning compensation for submarine basing and SLBM submarines belonging to third countries. The United States does not accept the validity of the considerations in that statement.

On May 26 Minister Semenov repeated the unilateral statement made on May 24. Ambassador Smith also repeated the U.S. rejection on May 26.

Protocol to the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems, July 3, 1974

The United States of America and the Union of Soviet Socialist Republics, hereinafter referred to as the Parties,

Proceeding from the Basic Principles of Relations between the United States of America and the Union of Soviet Socialist Republics signed on May 29, 1972,

Desiring to further the objectives of the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems signed on May 26, 1972, hereinafter referred to as the Treaty,

Reaffirming their conviction that the adoption of further measures for the limitation of strategic arms would contribute to strengthening international peace and security,

Proceeding from the premise that further limitation of anti-ballistic missile systems will create more favorable conditions for the completion of work on a permanent agreement on more complete measures for the limitation of strategic offensive arms,

Have agreed as follows :

Article I

1. Each Party shall be limited at any one time to a single area out of the two provided in Article III of the Treaty for deployment of anti-ballistic missile (ABM) systems or their components and accordingly shall not exercise its right to deploy an ABM system or its components in the second of the two ABM system deployment areas permitted by Article III of the Treaty, except as an exchange of one permitted area for the other in accordance with Article II of this Protocol.

2. Accordingly, except as permitted by Article II of this Protocol : the United States of America shall not deploy an ABM system or its components in the area centered on its capital, as permitted by Article III(a) of the Treaty, and the Soviet Union shall not deploy an ABM system or its components in the deployment area of intercontinental ballistic missile (ICBM) silo launchers permitted by Article III(b) of the Treaty.

Article II

1. Each Party shall have the right to dismantle or destroy its ABM system and the components thereof in the area where they are presently deployed and to deploy an ABM system or its components in the alternative area permitted by Article III of the Treaty, provided that prior to initiation of construction, notification is given in accord with the procedure agreed to by the Standing Consultative Commission, during the year beginning October 3, 1977, and ending October 2, 1978, or during any year which commences at five year intervals there-

after, those being the years for periodic review of the Treaty, as provided in Article XIV of the Treaty. This right may be exercised only once.

2. Accordingly, in the event of such notice, the United States would have the right to dismantle or destroy the ABM system and its components in the deployment area of IOBM silo launchers and to deploy an ABM system or its components in an area centered on its capital, as permitted by Article III(a) of the Treaty, and the Soviet Union would have the right to dismantle or destroy the ABM system and its components in the area centered on its capital and to deploy an ABM system or its components in an area containing IOBM silo launchers, as permitted by Article III (b) of the Treaty.

3. Dismantling or destruction and deployment of ABM systems or their components and the notification thereof shall be carried out in accordance with Article VIII of the ABM Treaty and procedures agreed to in the Standing Consultative Commission.

Article III

The rights and obligations established by the Treaty remain in force and shall be complied with by the Parties except to the extent modified by this Protocol. In particular, the deployment of an ABM system or its components within the area selected shall remain limited by the levels and other requirements established by the Treaty.

Article IV

This Protocol shall be subject to ratification in accordance with the constitutional procedures of each Party. It shall enter into force on the day of the exchange of instruments of ratification and shall thereafter be considered an integral part of the Treaty.

Done at Moscow on July 3, 1974, in duplicate, in the English and Russian languages, both texts being equally authentic.

For the United States of America:

RICHARD NIXON

President of the United States of America

For the Union of Soviet Socialist Republics:

L. I. BREZHNEV

General Secretary of the Central Committee of the CPSU

APPENDIX B: GLOSSARY[1]

Antiballistic Missile (ABM) System: A system to counter strategic ballistic missiles or their elements in flight trajectory, currently consisting of:

(1) ABM interceptor missiles, which are interceptor missiles constructed and deployed for an ABM role, or of a type tested in an ABM mode;

(2) ABM launchers, which are launchers constructed for launching ABM interceptor missiles; and

(3) ABM radars, which are radars constructed and deployed for an ABM role, or of a type tested in an ABM mode.

Ballistic Missile: Any missile which does not rely upon aerodynamic surfaces to produce lift and consequently follows a ballistic trajectory (i.e., that resulting when the body is acted upon only by gravity and aerodynamic drag) when thrust is terminated.

Intercontinental Ballistic Missile (ICBM): A land-based, rocket-propelled vehicle capable of delivering a warhead to intercontinental ranges (ranges in excess of about 3,000 nautical miles).

Intermediate-Range Ballistic Missile (IRBM): This term usually refers to a ballistic missile with a range capability of from about 1,500 to 3,000 nautical miles.

Submarine-Launched Ballistic Missile (SLBM): A ballistic missile carried in and launched from a submarine.

Circular Error Probability (CEP): A measure of the delivery accuracy of a weapon system used as a factor in determining probable damage to targets. It is the radius of a circle around the target at which a missile is aimed within which the warhead has a .5 probability of falling.

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1. Definitions are from SALT Lexicon, U.S. Arms Control and Disarmament Agency, Washington, D.C., 1974.

Counterforce Strike: An attack aimed at an adversary's military capability, especially his strategic military capability.

Cruise Missile: A guided missile which uses aerodynamic lift to offset gravity and propulsion to counteract drag. The major portion of a cruise missile's flight path remains within the earth's atmosphere.

Air-Launched Cruise Missile (ALCM): A cruise missile designed to be launched from an aircraft.

Submarine-Launched Cruise Missile, Sea-Launched Cruise Missile (SLCM): A cruise missile capable of being launched from a submerged or surfaced submarine or from a surface ship.

Depressed Trajectory: The trajectory of a ballistic missile fired at an angle to the ground significantly lower than the angle of a minimum energy trajectory.

Deterrence: Any strategy whose goal is to dissuade an opponent from attacking.

First-Strike (nuclear): The launching of an initial strategic nuclear attack before the opponent has used any strategic weapons himself.

Hardening of Silos: Protection of a missile site with concrete and earth and other measures so as to withstand blast, heat, or radiation from a nuclear attack.

Post-Boost Vehicle or Bus: The part of a MIRVed missile's payload that carries the reentry vehicles (RVs) and has a guidance package, fuel, and thrust devices for altering the ballistic flight path so that the RVs can be dispensed sequentially toward different targets.

Reentry Vehicle (RV): That portion of a ballistic missile designed to carry a nuclear warhead and to reenter the earth's atmosphere in the terminal portion of the missile trajectory.

Maneuvering Reentry Vehicle (MARV): A ballistic missile reentry vehicle equipped with its own navigation and control systems capable of adjusting its trajectory during reentry into the atmosphere.

Multiple Independently Targetable Reentry Vehicle (MIRV): Two or more reentry vehicles carried by a single missile and capable of being independently targeted.

Second-Strike: A term usually used to refer to a retaliatory attack in response to a first strike.

Strategic Stability: Strategic stability encompasses both crisis stability and arms stability, and refers to a relationship in which neither side has an incentive to initiate the use of strategic nuclear forces in a crisis or perceives the necessity to undertake major new arms programs to avoid being placed at a strategic disadvantage.

Surface-To-Air Missile (SAM): A surface-launched missile employed to counter airborne threats.

Throw-Weight: Ballistic missile throw-weight is the maximum useful weight which has been flight tested on the boost stages of the missile. The useful weight includes weight of the reentry vehicles, penetration aids, dispensing and release mechanisms, [guidance devices], reentry shrouds, covers, buses and propulsion devices with their propellants (but not the final boost stages) which are present at the end of the boost phase.

TRIAD: The term used in referring to the basic structure of the US strategic deterrent force. It is comprised of land-based ICBMs, the strategic bomber force, and the Polaris/Poseidon submarine fleet.

Warhead: That part of a missile, projectile, or torpedo that contains the explosive intended to inflict damage.

Yield: The force of a nuclear explosion expressed in terms of the number of tons of TNT that would have to be exploded to produce the same energy.