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SYSTEM II  
90164

NATIONAL SECURITY COUNCIL  
WASHINGTON, D.C. 20506

ACTION

February 24, 1988

MEMORANDUM FOR COLIN L. POWELL

FROM: *[Signature]* LINTON BROOKS/BILL HEISER/BOB LINHART *[Signature]*  
SUBJECT: START Inspection Procedures for RV Counting

The Inspection Protocol to our draft START Treaty has placeholders on RV counting, ALCM counting, closeout inspections, suspect site inspections, tagging and perimeter/portal monitoring, pending completion of ongoing interagency work. If we are to have any chance of signing an acceptable START Treaty in Moscow this summer, we need to table detailed provisions to replace these placeholders as soon as possible. Attached (Tab II) is the interagency submitted language on RV counting. It includes both protocol language and conforming changes to the treaty itself.

There is one issue, how many missiles can be examined during a single RV inspection visit. The JCS strongly urge that we permit only one missile to be inspected per visit; all other agencies would leave the number blank.

The JCS problem primarily concerns ICBMs, which cannot be inspected in silos. To conduct an inspection will require days and involve moving an ICBM 50 to 150 miles over civilian roads with ground and air escort. Because this is so disruptive, the JCS don't want to have to do it twice in a row. Additional JCS views, which we urge you to review, are at Tab III.

The remaining agencies note that the probability of detecting a violation is a direct function of the total number of unique missile inspections we conduct.

*[Redacted]* (see DCI paper at Tab IV for additional details).

These agencies would thus defer making a decision on how many missiles we can examine per inspection until after we have decided on how many inspections there will be each year.

NSC Staff recognize the validity of the JCS concern. If we had to make a final decision now, we would support the JCS view. It costs us nothing, however, to keep our options open until we see the Soviet reaction. Thus we recommend leaving the number blank.

Since the issue to be resolved is relatively minor and we are deferring a decision rather than overruling the JCS, we recommend you approve this for the President. You may wish to mention that you have done so at your next convenient morning meeting with him.

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Declassify on: OADR

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NLRR M1358 #5

BY RW NARA DATE 7/23/10

E.O. 12958  
As Amended  
Sec. 1.4(a)

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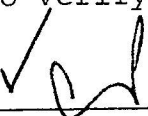
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Recommendation






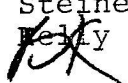
That you authorize Paul Stevens to sign the memorandum at Tab I approving the revised START treaty and protocol language on on-site inspection to verify RV numbers.

Approve

✓ 

Disapprove

\_\_\_\_\_

 Don Manley,  Steve Steiner,  Will Tobey,  Judyt Mandel,  Fritz Ermarth and Barry  Kelly concur.

Attachment

Tab I	Stevens Memorandum to Agencies
Tab II	Interagency Draft Language
Tab III	JCS Views
Tab IV	DCI Analysis

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INDIRECT LIMITS ON THROW-WEIGHT  
AND OTHER COLLATERAL CONSTRAINTS

The START Interdepartmental Group (IG) has examined a large number of possible indirect limits on throw-weight and other collateral constraints to supplement the Administration's basic START proposal. The other collateral constraints seek to limit Soviet breakout and circumvention potential and to enhance confidence and verification. These two groups of constraints are examined below.

Indirect Limits on Throw-Weight

The first phase of reductions in the President's START proposal seeks to limit missile warheads and deployed missiles. This phase would involve reductions of missile warheads to 5000, no more than half of which could be on ICBMs, and reductions of deployed missiles to 850. Direct limits on missile throw-weight are deferred until the second phase of reductions in START, where we want to reduce to equal levels of throw-weight at less than current U.S. levels. However, we still want to achieve significant reductions in the throw-weight disparity in the first phase in accord with Presidential direction to set the stage for the further and direct throw-weight reductions of the second phase.

Today the Soviet Union has an estimated 5.1 million kilograms (Mkg) of ballistic missile throw-weight while the U.S. has [REDACTED]\*. The deployed missile and missile RV reductions of the first phase would themselves result in greater Soviet throw-weight reductions than those for the U.S. Indirect throw-weight limits are necessary to assure that the reductions meet the desired first phase throw-weight levels.

Before reviewing the constraint options, three terms are defined for the purposes of this paper:

- a heavy missile is one which is larger than the SS-19/MX class of missiles (i.e., a throw-weight in excess of [REDACTED]). For example, the Soviet SS-18 has an estimated 7600 kg of throw-weight.

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\* Note that because of our uncertainties in evaluating the throw-weights of the various types of deployed Soviet missiles, there is an uncertainty of +1.0 Mkg in the total Soviet missile throw-weight.

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MLRR M1334 #14

BY RUV NARA DATE 7/13/10

Sec. 3.3(b)(4)

As Amended

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- a light missile is one which is no larger than missiles of the Minuteman/SS-11 class (i.e., throw-weights no larger than [REDACTED])
- a medium missile is one which falls between these two extremes (e.g., SS-19, MX, Trident II)

The IG has identified four broad classes of constraints to reduce the throw-weight disparity: constraints which ban heavy missiles, constraints which reduce heavy missiles, constraints which reduce medium ICBMs, and constraints which limit RV weight, thereby reducing aggregate throw-weight. All these constraints have no adverse impact on U.S. force plans.

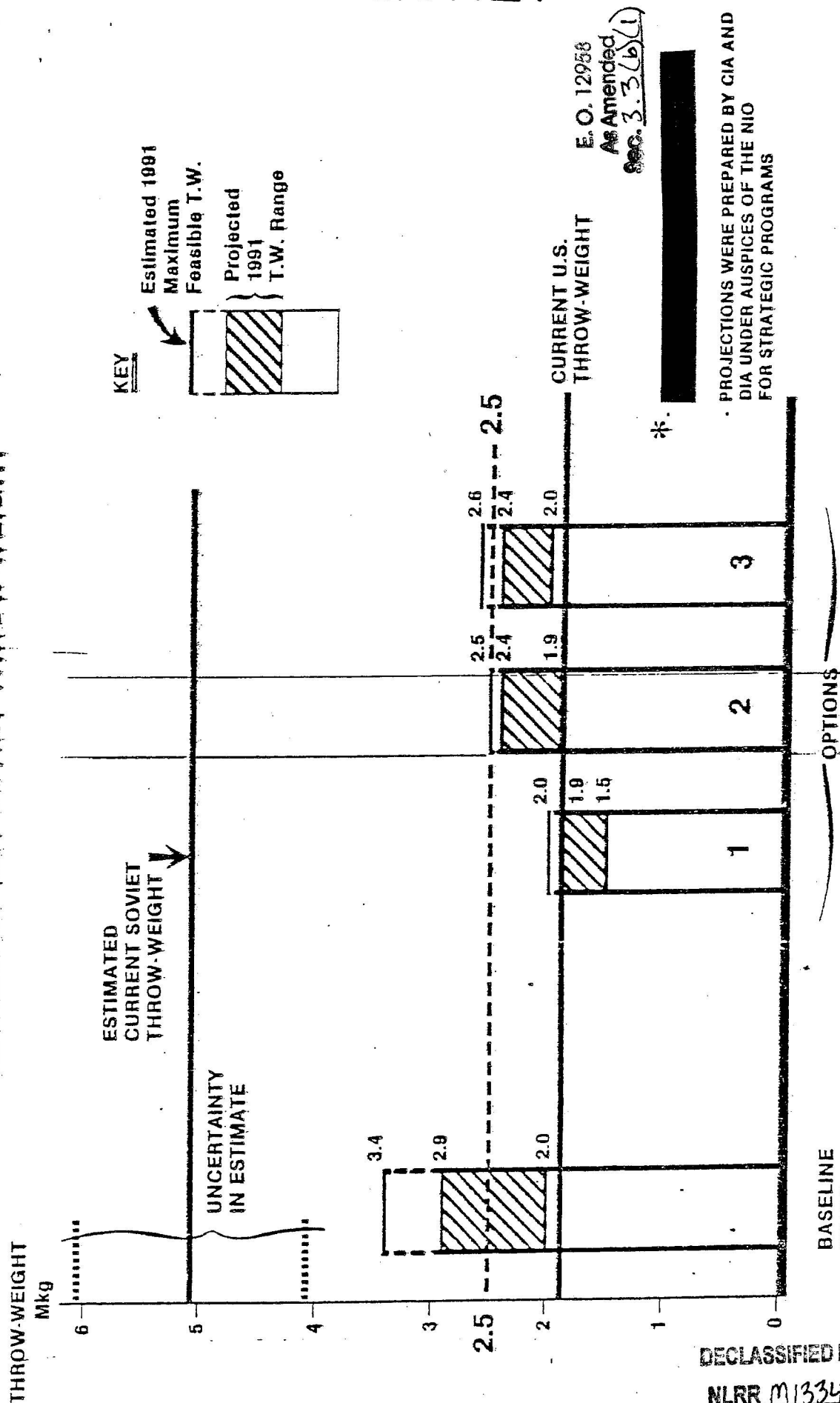
The impact of our baseline START proposal and each option on estimated 1991 Soviet throw-weight levels is shown in the vertical bars of Figure 1. The range of this estimated impact is shown at the top of each bar. The two horizontal lines show current Soviet (upper line) and U.S. (lower line) throw-weight levels. Figure 1 shows that the President's baseline proposal would, according to intelligence community estimates, be likely to result in a Soviet deployed missile force whose total aggregate throw-weight would be 2.0 - 2.9 Mkg in 1991. OSD points out that if the Soviets chose to maximize throw-weight this range could be as high as 3.4 Mkg in 1991. Thus the President's baseline START proposal itself achieves significant throw-weight reductions but does not guarantee that the Soviets would reduce to levels consistent with Presidential guidance.

Other indirect throw-weight limit options reduce estimated 1991 Soviet throw-weight to varying degrees as shown in the figure. It should be stressed that the intelligence community is not able to generate precise throw-weight figures. All figures are best estimates with an error margin of 15 - 25 percent. Factors in addition to simple numerical comparisons between options should also be used as a basis for decision.

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FIGURE 1

IMPACT OF CONSTRAINT OPTIONS ON  
ESTIMATED 1991 SOVIET THROW-WEIGHT\*



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Option 1: Ban on Heavy Missiles Plus Ceiling on Medium ICBMs

- Bans heavy missiles in the first phase
- Augments the effect of the heavy missile ban by further restricting medium ICBMs to a maximum of 200 missiles

Projected 1991 Soviet TW Range: 1.5 - 1.9 Mkg

Estimated Maximum Feasible 1991 Soviet TW: 2.0 Mkg

Option 2: Proportional Reduction of Heavy Missiles in First Phase and Total Ban in Second Phase; Equal Ceilings on Total Combined Heavy Missiles and Medium ICBMs

- Combined limit of 210 heavy missiles and medium ICBMs
- Subceiling of 110 heavy missiles (same proportion as in current Soviet forces)
- Ban on new heavy missiles in first phase and all heavy missiles in second phase

Projected 1991 Soviet TW Range: 1.9(+) - 2.4 Mkg

Estimated Maximum Feasible 1991 Soviet TW: 2.5 Mkg

Option 3: Proportional Reduction of Heavy Missiles in First Phase and Weight Ceiling on New RVs

- Restricts Soviet heavy ICBMs to 110 (same proportion as in current Soviet forces)
- Weight of RVs on new missile systems limited to approximately 200 kg
- Throw-weight of any new missile can be no more than twice the sum of the weights of its RVs.

Projected 1991 Soviet TW Range: 2.0 - 2.4 Mkg

Estimated Maximum Feasible 1991 Soviet TW: 2.6 Mkg

The following are the views of the agencies:

- (+) Could be as low as 1.5 Mkg if Soviets eliminate all heavies in the first phase. The Intelligence Community believes programmatic requirements probably would lead the Soviets to do this rather than wait until the second phase.

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### Other Collateral Constraints

This section discusses other collateral constraints for a START agreement. It does not address those collateral constraints previously accepted by the IG (i.e., counting rules to associate a number of RVs with each missile type, to associate missile types with their launchers, and the agreed baseline data). The objective of these constraints is to limit Soviet breakout and circumvention potential and to enhance confidence and verification. This is not meant to be an all-inclusive list, and other constraints can be added during the course of the negotiations.

#### Issue 1: Fractionation Limits

This option would limit the number of RVs that could be tested or deployed on classes of missiles to 10 RVs on ICBMs and 14 on SLBMs. SS-18s could be "grandfathered" at 14 RVs to reflect their special situation.

Fractionation limits could probably be attained without much effort. Monitoring fractionation limits would be no more difficult than monitoring the ceiling on the number of missile RVs.

#### Pro

- Prohibits the breakout option of the Soviets testing but not deploying (or deploying in small numbers) a highly fractionated missile which could later be produced in quantity and deployed in a break-out situation
- Some believe that failing to include this SALT II - type constraint, generally regarded as a positive element of the treaty, from our START proposal would increase the likelihood of a divisive debate over SALT II ratification
- ~~Some believe that the absence of fractionation limits~~ in the U.S. START proposal could be invoked by the Soviets as legitimizing their abandonment of this constraint if either or both sides alter the current "no undercut" policy.

#### Con

- Would not further reduce permitted Soviet warhead deployments because the Administration's START proposal already provides for a ceiling on total missile warheads of 5000.

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- Increased fractionation of permitted missiles within the 5000 aggregate warhead ceiling would reduce the break-out threat of the Soviets later exploiting their throw-weight by increased fractionation
- Some believe that retention of this SALT II - type feature in the President's START proposal could undermine the fundamental START goal of an aggregate warhead ceiling by setting the stage for an indirect SALT II approach using such a fractionation limit combined with missile or launcher limits
- Some believe this feature would unnecessarily make START parallel SALT II on this issue and would exaggerate the importance of continuing the SALT II indirect limit, thus increasing pressure for SALT II ratification
- Some believe approaches other than fractionation limits, such as inventory limits on non-deployed missiles, can more effectively limit the breakout scenario listed under the "pro" arguments

#### Recommendation

State supports the inclusion of a fractionation limit as part of our START proposal. OSD opposes such inclusion. JCS, ACDA, and the START Negotiator are not opposed to a fractionation limit. The IG recommends that this issue be referred to the NSC for decision.

#### Issue 2: Ban on Relocation of Fixed ICBM Launchers and Major Modifications to Existing ICBM Launchers

The Intelligence Community believes this constraint would significantly enhance our ability to verify limits on deployed missiles and warheads

[REDACTED]

Such a constraint would require MX to be deployed in existing fixed launchers or in mobile launchers. The effect of such a constraint on MX would depend on the details of the MX basing mode chosen.

As Amended  
3.3 (b)(1)  
E.O. 12958



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Pro

- Enhances verifiability
- Poses some restraint on Soviet ICBM modernization options

Con

- Continuation of SALT II - like limits could create political and technical obstacles to some MX basing plans under consideration
- Could undercut the basic START unit of limitations by changing focus to launcher limitations

Recommendation

The IG notes the concern of the intelligence community on this subject but recommends that the U.S. should not propose such a ban until at least after an MX basing decision is made, if at all.

Issue 3: Limits on the Size of New ICBM Launchers

Limits could be placed on the dimensions and characteristics of new ICBM launchers to ensure that they were not compatible with substantially larger missiles. The objective of such a constraint would be to prevent Soviet deployment of new silos compatible with much larger missiles than those initially deployed in the silos. It would be difficult to draft a constraint that would limit the breakout potential of new launchers and not interfere with efforts to harden launchers. Based on our current concepts for MX hardened silos, the U.S. may require launchers larger than those for the SS-18.

Pro

- Restricts Soviet breakout option
- Would provide more flexibility for U.S. force posture

Con

- Could preclude our ability to harden silos for MX

Recommendation

The IG recommends that the U.S. should not propose limits on launcher size until a final MX basing decision is made.

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#### Issue 4: Phasing Constraints

The ceiling on the number of missiles and RVs will be fully effective only after a number of years. Without an agreed schedule for reductions, it would be temporarily possible for the Soviets to continue replacing single-warhead systems with MIRVed systems. Thus they could actually increase their warhead levels as they carried out reductions in deployed missile levels while our warhead levels would be dropping. The current small Soviet lead in missile warheads would thus grow for several years before being eliminated. This phenomenon is illustrated in Figure 2.

#### Recommendation

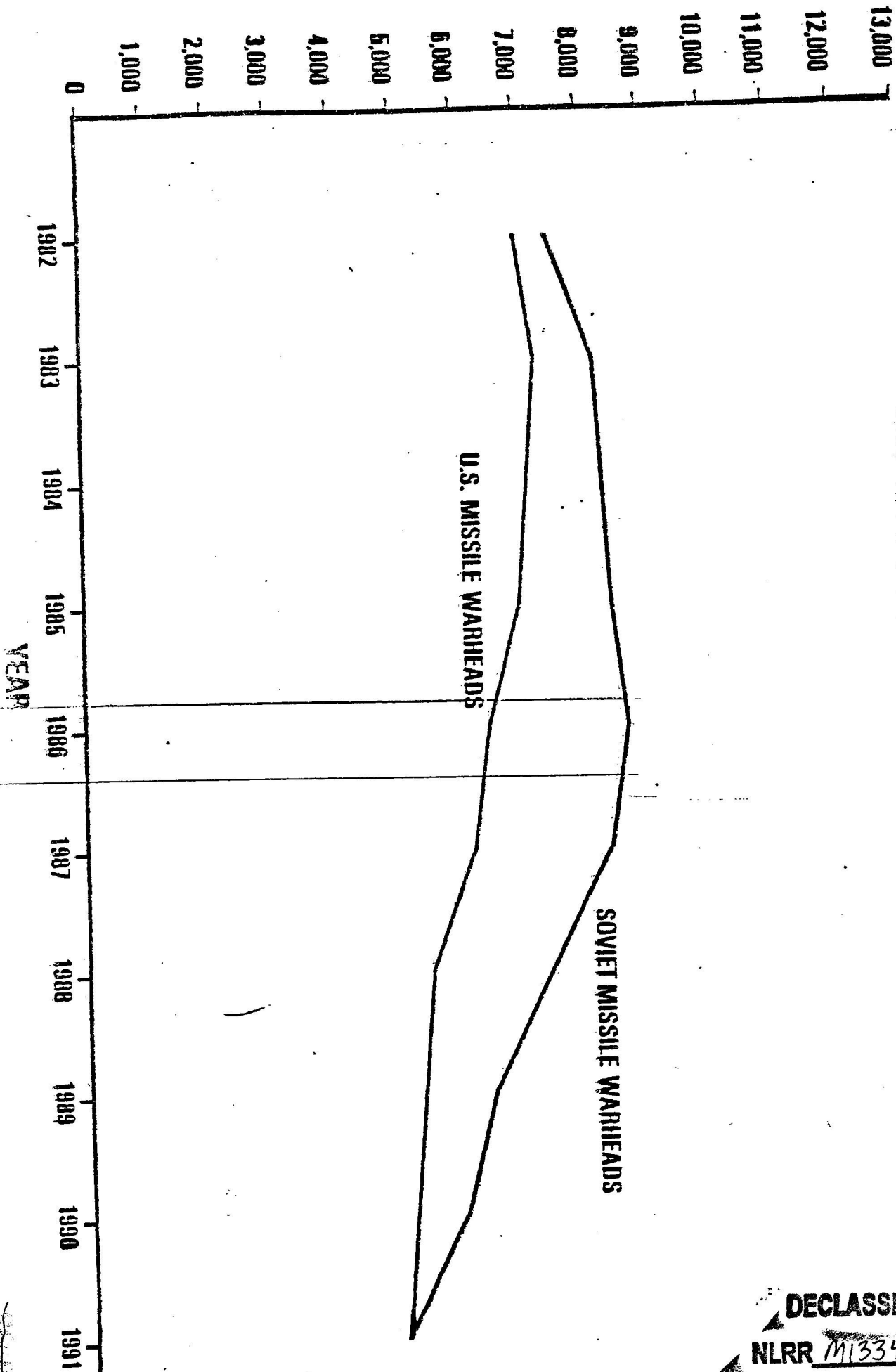
To avoid creating a warhead gap during the phasing-in of the first phase agreement the IG recommends that rules establishing equal levels of warheads at agreed intervals be developed.

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# ILLUSTRATIVE US - SOVIET MISSILE WARHEADS

UNDER A

5000 MISSILE WARHEAD/850 MISSILE PROPOSAL



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BY RW NARA DATE 7/13/10

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