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NATIONAL SECURITY COUNCIL
WASHINGTON DC 20506

September 9, 1989

MEMORANDUM FOR:

MR. CARNES LORD
Assistant to the Vice President
for National Security
Affairs

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Executive Secretary
Department of State

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Executive Secretary
Department of Defense

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Executive Secretary
Department of Energy

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Executive Assistant to the
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Joint Chiefs of Staff

DR. ALAN BROMLEY
Director
Office of Science and
Technology Policy

MS. BARBARA STARR
Executive Secretary
Arms Control and Disarmament
Agency

AMBASSADOR EDWARD ROWNEY
Special Advisor to the
President and Secretary of
State on Arms Control
Matters
Department of State

AMBASSADOR PAUL ROBINSON
Chief Negotiator,
Nuclear Testing Talks
Arms Control and Disarmament
Agency

SUBJECT: Deputies Committee Meeting on Nuclear Testing, Tuesday, September 12, 1989, 4:00 PM - 5:00 PM (S)

There will be a meeting of the Deputies Committee on Tuesday, September 12, 1989, 4:00 PM to 5:00 PM, in the Situation Room to discuss nuclear testing. An interagency-prepared paper that reviews needed decisions is attached. (S)

Attendance is limited to principal plus one. In addition, the U.S. Nuclear Testing Negotiator is invited to attend. (U)

G. Philip Hughes
Executive Secretary

Attachment
Tab A Nuclear Testing Issue Paper (S)

#24
12-M-0666-A1

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Declassify on: OADR

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September 8, 1989

Issue Paper

Nuclear Testing Talks

The Soviets have indicated their strong desire to complete the protocols to the Threshold Test Ban Treaty (TTBT) and the Peaceful Nuclear Explosions Treaty (PNET). At the last round of Nuclear Testing Talks, they offered to accept, in principle, the central element of the US position -- the right to conduct CORRTEX measurements on all Soviet nuclear tests above an agreed trigger level -- if we would also agree to include seismic and on-site inspection provisions as parallel rights.

The US has also stated a desire to complete the protocols, and has used the fact of this negotiation to good advantage with the Congress and in international fora. That said, we believe that as soon as the protocols are complete, the Soviets will renew their call for a comprehensive test ban. Moreover, once these treaties are ratified we will come under increasing pressure to take further steps to limit nuclear testing. Although the US is proceeding with these negotiations within the framework of the step-by-step approach, no further testing limitations that are in our national security interests have yet been identified.

If the Soviets will in fact agree to the types of measurements we require for effective verification in exchange for conditions of their own which are at least no more intrusive than those we demand, there is considerable potential for US embarrassment -- and associated domestic and international political costs -- if we refuse to negotiate on those reciprocal terms.

Whatever the decision on the Soviet proposal, there will still be considerable work to do before the protocols are completed. Thus we should not place ourselves in the position of working against a negotiating deadline.

Background

The US and the USSR have concluded four rounds of negotiations seeking effective verification procedures for the TTBT and the PNET. These treaties were signed in 1974 and 1976, but were never ratified. They call for verification by national technical means which, for underground nuclear explosions, translates to long-range seismic measurements.

[redacted]

[redacted]

Unacceptably large uncertainties in seismic measurements and the possibility of reducing the magnitude of the signals so that they would imply a lower yield, led to the US position that seismic is an inadequate method to verify compliance of the 150 kt yield limit of the TTBT.

[redacted]

CIA 1.4(c) OSD 3.3(b)(1) USAF 3.3(b)(1)(4)

The US has developed a more accurate means to measure directly the yield of a nuclear explosion, called CORRTEX. This process involves an electrical cable buried near the nuclear device. As the shock wave from an underground nuclear explosion propagates through the earth, the cable is crushed, shortening its apparent length. This length change is measured electronically as a function of time and results in a determination of the yield, in a standard testing configuration, to an accuracy of 1.3 or better.

The US entered negotiations on the basis that effective verification requires this type of direct yield measurement on every test with a declared yield above a specified threshold or trigger level. Both sides have agreed to CORRTEX in the PNET for all explosions predicted to be greater than 50 kt. Until this past round, the Soviets have refused to agree to routine use of CORRTEX on weapons tests (limited by the TTBT), but would have allowed two CORRTEX measurements annually on tests over 100 kt to calibrate seismic stations.

During round four, the Soviets offered a "package," signaling that they will agree to the right for routine CORRTEX measurements for all tests above an agreed trigger level (the US position is 50 kt; the Soviets indicate they prefer 75 kt) if we will agree to the right to in-country seismic measurements along with a provision for on-site inspection for tests above that same trigger level. (A number of important issues remain to be agreed on the configuration and test procedures for CORRTEX.)

The US has rejected inclusion of seismic methods in the protocol. Our consistent position has been that seismic methods do not provide a sufficiently accurate yield measurement for verification, and, as an element of national technical means, are not appropriate for inclusion in the protocol. However, we have told the Soviets that if they agree to the US use of CORRTEX on all tests above 50 kt, we would agree to any other method that is no more intrusive than CORRTEX.

[redacted]

The Soviets have taken the position that seismic is adequate for Soviet determination of US treaty compliance but have made no arguments which would demonstrate that seismic measurements provide sufficient accuracy. They have emphasized that regardless of US views on the value of seismic yield measurement, it remains the preferred Soviet verification method.

With respect to on-site inspection, there is no agreement among US agencies on whether it should be an element of the US verification position.

We must decide whether and how to deal with nuclear testing at the upcoming Ministerial and the next negotiating round. If we decide to make a counterproposal at the Ministerial, there remain numerous issues to be resolved in the negotiations themselves. The key issues and possible elements of a US counterproposal are:

-- Should we agree to the right to conduct seismic measurements in the country of the testing party, provided we retain the right to conduct CORRTEX measurements on all tests above an agreed trigger level and provided acceptable, relevant procedures can be agreed for both CORRTEX and seismic?

-- Should we seek OSI as an adjunct to our own verification concept, and if so, at what trigger level? Should we accept the Soviet proposal for inclusion of OSI if the verifying party does not conduct CORRTEX measurements?

-- What should be the "trigger" level at which either CORRTEX or in-country seismic measurements are permitted?

-- Should the US continue to insist on the right to conduct a minimum number of CORRTEX measurements even if the testing party declares no tests above the trigger level?

An additional decision will be needed on how to deal with tests above the trigger level in "non-standard" geometries, i.e. test configurations which may require special procedures for CORRTEX. A separate paper on this issue will follow.

Seismic

The Soviets can detect US nuclear explosions from seismic stations in Europe and Asia. The Soviets attempt to justify their seismic proposal with a claim to need to measure one of the seismic waves that does not propagate across oceans. However, this detailed seismic data is available to them (and to the US) through an international network of seismic stations, including

stations in the US. Thus they already have access to the data they would measure for themselves under their proposal. Although the Soviets have stated that their verification methods require this information, some believe that in seeking the right to conduct in-country seismic measurements, the Soviets are laying the groundwork for verification of reduced yield thresholds and a comprehensive test ban. Some are concerned that acceptance of the Soviet proposal would appear to legitimize seismic yield determination as an acceptable verification technique for underground testing.

Some agencies believe that we should offer a counterproposal that accepts the Soviet use of seismic, provided we retain an unambiguous right to conduct CORRTEX measurements. They argue that since the Soviets would obtain no new data, this is a small price to pay for achieving our principal objective of effective verification of the TTBT. They also believe that the domestic and international pressures would be severe if we fail to accept seismic as an element of the protocol if our own requirements for effective verification are also satisfied.

Other agencies oppose including seismic as a verification technique in the TTBT, believing that the acceptance of seismic in the TTBT protocol gives credibility to a technique that is not sufficiently accurate for effective verification and is already available to both sides without the protocol. They point out that the Soviets have not yet agreed to essential implementation procedures for CORRTEX.

Decision:

Option 1. Offer a counterproposal to the Soviets stating that we will accept, in principle, the right to seismic measurements for yields above an agreed trigger level, provided the US retains the right to CORRTEX measurements of all tests above the trigger, and contingent upon agreement on effective CORRTEX implementation procedures. If this approach is selected we need decisions now on the trigger level, on-site inspection, and a minimum number of CORRTEX measurements to flesh out the counterproposal. (Supported by JCS, State, DOE and ACDA.)

Option 2. Reserve on the Soviet proposal; offer a working group in the negotiations for the Soviets to explain why this is an effective and sufficiently accurate means to verify the treaty limits. (Supported by _____.)

Option 3. Reject the Soviet proposal; reaffirm our position that seismic is not a means to effectively verify the TTBT. (Supported by _____.)

[redacted]

Trigger Level and On-Site Inspection

We need to decide whether to adjust our trigger level for CORRTEX (and seismic if option 1 above is selected) in the TTBT to 75 or 100 kt or to keep it at 50 kt. We need also to decide whether to include on-site inspection at the test sites when CORRTEX is not used on a test, and if so, the OSI trigger level.

Trigger level. For determining compliance with the 150 kt limit of the TTBT, it is not necessary to make CORRTEX measurements of every test -- only those with relatively high yields which might appear through seismic monitoring to exceed 150 kt. OSD 3.3(b)(1)

Early in the negotiations, the US set the trigger level at 75 kt in the TTBT and also sought a complementary right to choose any geographical area within a test site and to measure the two highest yield tests in that area annually. This was to protect against evasion by testing in areas of reduced energy coupling.

[redacted] USAF 3.3(b)(1)(4)

The US later dropped its position on the right to choose geographic areas, judging it too be too intrusive on the US program. At the same time, the US lowered the TTBT trigger level to 50 kt to help guard against potential decoupling scenarios, to avoid the need for more intrusive CORRTEX measurements in geographical areas of special concern, and to be consistent with the PNET. (One agency believes that if we raise the trigger level to above 50 kt we will need to revisit our position on the complementary right to test in specific geographical areas.) In PNET, the sides have agreed to the 50 kt trigger level and to OSI above a 35 kt trigger level. For the TTBT, the Soviets originally proposed a trigger level for CORRTEX of 100 kt and offered to lower it to 75 kt in their "package." They apparently have not rejected the US-proposed 50 kt level, and there are indications of flexibility.

On-site inspections. We do not have a US position on on-site inspection. All agree that, by itself, OSI would not provide for effective verification since OSI does not measure yield. Some agencies believe that we need OSI as an element of a complete verification regime to help deter cheating and to provide information to improve seismic yield estimates. Others oppose OSI because they do not believe it contributes to effective verification (in that there is no clear way to use data from OSI to improve seismic yield estimates) and it could undermine internal US support for the implementation of CORRTEX.

The Soviets have now proposed OSI be used in conjunction with seismic measurements as part of their package. There are some indications that this may not be an essential part of their proposal (in one mid-round discussion, one Soviet delegate said they were willing to take OSI off the table; however in subsequent discussions, OSI was presented as an integral part of their package).

Those who believe on-site inspection should be an element of the US position point out that OSI is part of what is done on the test site for CORRTEX. Approximately 15 personnel would be on site for about two weeks to confirm geological information that the testing party provided with its notification of the planned test, obtain geological samples and confirm the absence (or presence) of cavities or large voids.

The Soviets would apparently use OSI in a similar manner for tests which they choose only to measure with remote seismic sensors. Thus the Soviets would have identical trigger levels for CORRTEX, seismic, and OSI.

Some of those in the US who support OSI prefer it at a lower level (35-50 kt) than for CORRTEX. Some also draw a relationship between OSI and the CORRTEX/seismic trigger level, believing we can achieve effective verification with a 75 kt trigger level or, in the case of one agency, a 100 kt trigger level if we have OSI, but must insist on 50 kt if we do not have OSI. There is a concern within agencies that support OSI that the Soviets could exceed the 150 kt yield limit by testing in unusual geometries or geologies in which the energy of the nuclear explosion would not efficiently "couple" into the earth so that remote seismic sensors would indicate a lower yield. They believe that at existing test sites OSI would help deter and limit Soviet opportunity to cheat and also help improve our seismic yield estimates.

Others who support OSI are concerned that the US will not always choose to exercise its right to conduct CORRTEX measurements on all tests over the trigger level because of the expense and energy involved. (The cost to CORRTEX a Soviet test is estimated at $8.5-10 million.) They argue that OSI of these tests will ensure the Soviets do not change test conditions after the US decides not to instrument a particular test. Proponents of OSI believe that it is not credible to reject OSI at US test sites for those tests at which the Soviets choose to conduct seismic measurements and not CORRTEX -- it is far preferable to have a limited Soviet presence on-site before the test than an extended Soviet presence conducting electronic measurements during the test.

[redacted]

[redacted]

CIA 1.4(c) OSD 3.3(b)(1)

Opponents of OSI believe that there is little to be gained by OSI and much to be lost. They argue that at the current test sites there is little opportunity for the large decoupling scenarios advanced by OSI proponents. They cite USGS reports that decoupling appears to be infeasible at Semipalatinsk test sites because of the local geology, high water table and containment requirements. Thus Soviet evasion scenarios would likely be limited to the Novaya Zemlya test area. Here the decoupling would be at most a factor of two to three for tests up to 100 kt and somewhat less for higher yields. OSI opponents note that for high yield tests, covert long-term mining and spoil removal would be difficult, expensive, and be easily detectable through NTM and thus such activity would likely be discovered even without OSI. They believe that CORRTEX measurements with a trigger level of 50 kt provide for effective verification and a factor of three in the uncertainty and decoupling.

Opponents of OSI also argue that the added presence of Soviets at our Nevada test site exposes us to more intelligence activities for little or no gain. Establishing an OSI trigger level below that of CORRTEX (i.e. 35 kt) provides the Soviets with additional opportunities to gather data concerning the 35-50 kt spectrum of the US test program. Further, establishing an OSI alternative to CORRTEX (trigger level the same for OSI and CORRTEX) provides the Soviets with a right to be present at our test site, a right they would not have under the current US position if they opt not to CORRTEX a particular test. In this regard, they believe the absence of a right to OSI would be a benefit to our test program by allowing the US to change test conditions after the Soviets decide not to instrument a particular test. Opponents believe OSI does not reduce seismic uncertainties and point out that we have consistently argued that seismic is not accurate enough for effective verification. They also argue that there is no accepted way to use OSI information obtained about voids or unusual geologies to correct seismic NTM yield estimates. Thus we would have the same unacceptable uncertainties we now have with seismic NTM.

[redacted]

Decision:

Option 1. On-site inspection trigger level at 35-50 kt; CORRTEX and seismic trigger level at **50 kt**. (Supported by ACDA.)

Option 1a. On-site inspection trigger level at 35-50 kt; CORRTEX and seismic trigger level at **75 kt**. (Supported by State; [ACDA's second alternative.)

Option 1b. On-site inspection trigger level at 35 kt; CORRTEX and seismic trigger level at **100 kt**. (Supported by DOE.)

Option 2. No right to OSI; CORRTEX and seismic trigger level at 50 kt. (Supported by JCS; OSD supports retention of the 50 kt trigger level and opposes OSI, but reserves on the issue of seismic.)

Option 3. CORRTEX trigger level at 50 kt; no seismic component; no OSI component. (Select this if Option 3 in the seismic section is chosen.)

CORRTEX at tests below the trigger level

There are some indications both in the intelligence and in statements by the Soviets at the negotiations that they may restrict their testing to the agreed trigger level (or at least to reduce significantly the number of tests above the trigger) in order to limit US presence at their test sites.

Our position in the negotiations has been that in the event the testing party did not declare tests above the trigger level, the verifying party would have the right to conduct CORRTEX measurements of the two highest yield tests during the year. This provision was designed to provide a degree of access and reciprocity for the US since we clearly plan to test up to 150 kt and to characterize the Soviet test site further, especially if concerns arise about areas of the test site which may naturally decouple the shock wave from the test explosion.

Some agencies believe that this is an unnecessary provision. They believe it has nothing to do with verification and that CORRTEX with an appropriate trigger level along with OSI will effectively verify the yield limit of the treaty. Moreover, if the Soviets restrict their testing to the trigger level in order to minimize US presence on their test site, we are the beneficiaries.

[redacted]

Other agencies believe the US would derive no verification benefits from the TTBT/PNET verification improvements unless the US conducts at least some CORRTEX measurements at Soviet test sites. If the bias is less than the US now assumes (a circumstance certainly known to the Soviets) the Soviets could test above 150 kt with impunity. Therefore, not only would important yield uncertainties persist, but the importance of verifying compliance with the trigger level would very significantly increase, to the point where we might need to treat the trigger level as a test limit for compliance purposes.

Those who support the need for a minimum number of CORRTEX measurements believe we can and should change the US position from a minimum of two measurements per year -- which implies an open-ended commitment -- to a more limited right for a minimum number of measurements over a specified time period. The number of tests and the time period have not yet been determined by the Arms Control PCC, but the specific numbers need not influence the decision. (An example of this approach is "The US requires the right to conduct a minimum of five CORRTEX measurements on tests in the Soviet Union during the first four years of the treaty.") Such a formulation would provide the data proponents of this approach require (and at higher yields where the data would be most useful) and may be more acceptable to the Soviets by limiting this right to a fixed time-period.

Since the Soviets have offered two calibration shots per year and we have asked for CORRTEX on two shots if the trigger level is not exceeded, there may be potential for agreement.

Decision:

Option 1. Change the US position and not seek the right to conduct CORRTEX measurements if the testing party does not declare tests above the trigger level. (Supported by JCS and State.)

Option 2. Change the US position to seek the added right to conduct a minimum of x CORRTEX measurements in a y year period if the testing party does not declare at least x tests above the trigger level. (Supported by ACDA, DCI and OSD.)

Attachments

Agency Position Papers

[redacted]

SEISMIC ISSUE

State supports Option One. State believes that acceptance of the Soviet package is the necessary step for securing the fundamental US goal throughout these negotiations -- effective verification of Soviet compliance through the right to CORRTEX all Soviet weapons tests above an agreed trigger. State agrees with other agencies that seismic measurement alone does not provide effective verification. However, continued rejection of the inclusion of seismic elements, based on this US view, ignores two central facts of the current decision. First, NOTHING in this proposal would obligate the US to rely upon or even conduct seismic measurements provided for in the Protocol. The Verifying Party and only the Verifying Party would have the right to choose hydro measurement, seismic and, should it be included in the Protocol, OSI. Second, whatever the US view on the effectiveness of seismic verification, the Soviets have continued to maintain that THEIR preferred verification method is seismic. The fact that the Soviets would receive no information that they do not obtain now from other sources is an important consideration in assessing the potential cost of seismic for the US. However, there seems little value in arguing against direct Soviet collection of this same information. The US is convinced that only data collected by US personnel using US equipment is validated and suitable for verification. It appears that the Soviets are seeking the same validation of their primary verification data.

In view of these considerations, STATE believes Option Two and Option Three offer no solution to the problem. Option Two would have the US conduct yet another discussion of the shortcomings of seismic methods. Past US explanations of this view, repeated by USDEL members at every opportunity, have not persuaded the Soviets to abandon their commitment to seismic. Equally sustained Soviets efforts have not shifted the US from its commitment to CORRTEX. There is no reason to believe that further discussions would have any more effect on Soviet views or even, at this point in the negotiations, that the Soviets would agree to such an inherently inconclusive discussion.

Option Three would reverse the US position on verification methods, namely that either side should have the right to employ any verification method provided it is no more intrusive than satellite hole CORRTEX. No agency opposed to seismic has argued that it would be so intrusive. More importantly, given the Soviets explicit linkage of hydro and seismic acceptance, Option Three is a prescription for US failure to secure its primary objective in these negotiations.

[redacted]

TRIGGER LEVELS

STATE supports Option One A. The US is negotiating a protocol intended to endure as long as our reliance upon nuclear weapons for our national security requires testing. STATE believes it is essential that the protocol include all the elements necessary to protect US interests now and in the foreseeable future. Belated recognition that necessary features were omitted will be of no help if future problems arise. STATE believes that those problems could be of two types: resource constraints and Soviet cheating.

It is impossible to be certain that, during the lengthy period of this treaty, the time will never come when the demands of our own continuing test program or some other resource constraints make it impossible for the US to CORRTEX one or more eligible Soviet tests. In such a circumstance without OSI, the US would be deprived of any opportunity for on-site collection of information. Instead, the US would be forced to rely solely upon the very seismic methods which we have repeatedly and rightly termed insufficient for effective verification. Opponents of OSI would thus appear to argue that, should the US be unable to CORRTEX a Soviet test, it is preferable for the US to have no directly collected, validated information than for the US to have some validated data. STATE believes instead that the US should have the choice of conducting OSI as an alternative - a choice the US and the US alone would make.

All agencies appear to agree that, at least in theory, the possiblity of Soviet cheating through decoupling exists. They disagree over whether such cheating is constrained by geology and/or readily detectable by other, existing verification methods. Both sides' arguments rest on assumptions about Soviet geology and test practices. If the US already had a body of validated data on Soviet test sites, these issues could be resolved now. [redacted] The question is thus whether, in the absence of validated data, the US does not require a safeguard against the possiblity that increased direct US experience at the Soviet test sites will prove that the theoretical problem of decoupling is, in fact, a real one. If we reject OSI now and then discover that decoupling possibilities exist, there is no reason to assume the Soviets would accomodate our newfound concerns by reopening the Protocol. STATE believes it is simple prudence to protect ourselves now against the possiblity of decoupling.

CIA 1.4(c) [redacted] OSD 3.3(b)(1)

STATE supports 35 kt as the trigger level for on-site inspection activities. This will protect against significant Soviet cheating through decoupling in either cavities or geological "sweet spots" up to a factor of five. The trigger level for on-site activities would then be identical in the PNET and TTBT. Having the right to come on site at a lower trigger level than for undertaking CORRTEX measurements effectively protects against misuse of the CORRTEX trigger level by the Soviets, since the requirement to notify the US of all tests of 35 kt or higher would result in there being little probability of seeing a 70 kt or higher seismic yield for which there was no prior notification. If there are overriding concerns regarding Soviet presence at the test site, we could accept a higher trigger for OSI.

STATE supports a 75 kt trigger for CORRTEX and seismic. The original US position, communicated to the Soviets at the start of the talks, was the right to CORRTEX all explosions at declared test sites exceeding 75 kt. This trigger level was lowered to 50 kt in order to deal with the possibility of geological "sweet spots". With OSI assuring that the Soviets cannot take advantage of such geological conditions to exceed the 150 kt level, there is no longer a requirement to CORRTEX tests below 75 kt. The 75 kt level also reduces the potential Soviet presence at the Nevada Test Site.

POS

NO OBJECTION TO FULL RELEASE

[redacted]

TWO TESTS BELOW THE CORRTEX TRIGGER

STATE supports Option One. STATE believes that our primary verification goal is achieved by the right to CORRTEX all Soviet weapons tests above an agreed trigger in combination with the right to conduct an effective OSI. The requirement to CORRTEX Soviet shots below the trigger level could impose an unnecessary burden on US CORRTEX resources. Any potential political problem, resulting from some perceived assymmetry in the number of tests measured on-site, would only occur if the Soviets unilaterally decide to abandon testing above the trigger level. STATE believes that should the Soviets so restrict their testing, an assumption that remains to be proven, the benefits to the US of a Soviet decision to forgo the research necessary for new, high yield nuclear weapons far outweigh the potential costs posed by any perceived assymmetry in the number of tests each side directly measures in a given year.

[redacted]

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OSD POSITIONS ON NTT ISSUES

TRIGGER LEVEL

OSD supports maintaining the CORRTEX trigger at 50 kt. OSD opposes OSI and, therefore, does not take a position on an OSI trigger level. The OSD position on seismic is under active consideration; thus, OSD reserves on the question of a seismic trigger level.

The decision to set the 50-kt trigger level for CORRTEX measurements reflected numerous systematic uncertainties regarding the relationship between the yields of Soviet tests and teleseismic signals (e.g., the "bias" factor), the potential for Soviet decoupling of high-yield tests, and the desire for consistency with the PNET. The 50-kt trigger makes it highly unlikely that the Soviets could opt not to notify the U.S. of a planned high-yield test, violate the 150-kt limit and still credibly argue that they had not exceeded the 50-kt notification requirement. The 50-kt trigger also minimizes the risk that the Soviets could declare a new test site (the issue of whether new tests sites will be permitted has not been agreed with the Soviets), and exploit opportunities to test in low-coupling media for the purpose of violating the 150-kt limit.

A case has not been made for returning to a 75-kt trigger. Rather, it has been incorrectly asserted that a U.S. decision to raise the CORRTEX trigger from 50 kt to 75 kt simply would be a return to our pre-NTT position. In fact, the pre-NTT position included an additional requirement for the right for the Verifying Party to specify a location at the other's test site where the Verifying Party could CORRTEX the two largest tests below 75 kt. If we were to move back to 75 kt as the trigger, we would need to consider returning to this requirement. The U.S. decision in 1988 to lower the TTBT trigger level from 75 kt to 50 kt reflected, in part, DoD and DoE desires to remove the intrusiveness associated with that additional right.

Finally, since there is no agreement within the USG on whether the data collected through OSI could reduce the unacceptable uncertainties of teleseismic methods, there is no strong technical basis for asserting that a 35-kt OSI trigger somehow could remove all our uncertainties about seismic estimates for Soviet tests declared to be in the 35-75 kt range. In particular, OSI would give no information on the seismic bias. Such assertions would have to be proven before the U.S. could consider raising the CORRTEX trigger to 75 kt.

DOS
NO RECOMMENDATION

~~SECRET~~

OSI

- OSD strongly opposes including any OSI component in the TTBT protocol. The U.S. should reject any OSI separate from CORRTEX. OSI would represent, in fact, a second teleseismic component in the TTBT. There is interagency agreement that OSI does not provide the effective verification achieved through CORRTEX. Enshrining OSI in the TTBT as a credible alternative to CORRTEX could make it very difficult to obtain resources necessary to implement CORRTEX and, especially if the OSI trigger is set below CORRTEX, would give the Soviets greater access to our test site. The Soviets clearly indicated during the last round that they were prepared to take OSI "off the table" if the U.S isn't interested.

- A detailed summary of the problems and inadequacies of OSI are found in the background and Tabs F (OSD position) and H of the interagency decision paper on OSI of June 20, 1989.

CORRTEX MEASUREMENTS BELOW THE 50-kt TRIGGER

- OSD supports retaining the U.S. position, which provides for the right to two CORRTEX tests per year if the testing party does not declare any tests above the trigger level of 50 kt.

- There are strong reasons for retaining the current U.S. position. We clearly have a requirement to continue testing up to the 150-kt limit. As a result, we can expect that the Soviets will be present at our test site after TTBT ratification. If the U.S. were to drop this provision, the Soviets could deny us access to their test site by simply not declaring any tests above 50 kt. (This does not mean, of course, that the Soviets necessarily would restrict their tests to below 50 kt, as some agencies incorrectly have suggested.) It would be politically difficult for the Administration to defend a TTBT protocol before the Senate if its verification provisions arguably would affect only the U.S.

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JCS POSITION ON SOVIET SEISMIC PROPOSAL

JCS Support Option 1 (with suggested modifications underlined): During the Ministerial, offer a counterproposal to the Soviets that we will accept the right to seismic measurements in the country of the testing party for yields above an agreed trigger level, provided the US retains the right to CORRTEX yield measurements of all tests above an agreed trigger; stipulate that the US would be willing to discuss the specifics of such an agreement during NTT Round V.

(NOTE: If this option is selected, we need decisions on the other elements of the US counterproposal including the trigger level, on-site inspection, minimum number of CORRTEX measurements and tests in non-standard geometries. We would also need to agree with the Soviets on a number of outstanding CORRTEX configuration issues.)

Existing US position concerning what verification method(s) the Soviets can use to verify US compliance with the TTBT is that "the Soviets can use any method that we (US) determine is no more intrusive than CORRTEX in a satellite hole." In light of this policy, it would be politically difficult to outright reject the Soviet seismic proposal. However, as do the Soviets, the US should demand technical justification for each component of the Soviet seismic proposal. The JCS believe the US should accept in principle a mimimal seismic component for the TTBT provided the Soviets accept our existing CORRTEX requirements (including the 50kt trigger)and the necessary implementing provisions; the latter must include hydrodynamic measurement for non-standard tests, as well.

DOS
NO RECOMMENDATION

SECRET

[redacted]

JCS POSITION ON OSI AT EXISTING TEST SITES
FOR THE THRESHOLD TEST BAN TREATY

JCS Support Option 4: CORRTEX and seismic trigger level at 50 kt. No right to OSI.

OSI beginning at the 35 kt level is unacceptable in the TTBT context because of the adverse impact on the US test program. While the number of tests in the 35 to 50 kt range has historically been small, that number is likely to increase, as is the sensitivity of the types of tests (i.e., effects and SDI).

Additionally, the proponents of OSI have failed to present a credible evasion scenario that an OSI provision could preclude. Further, if geologic formations exist or could be created clandestinely which might offer the opportunity to decouple a 150 kt test at factors above 2, and if the Soviets were willing to attempt such a test, there would be no impetus for the Soviets to announce that the test would breach the OSI threshold; the US would simply not be invited to be present on the test site.

[redacted]

OSD 3.3(b)(1)

DOS
NO RECOMMENDATION

[redacted]

[redacted]

JCS POSITION FOR CORRTEX OF TESTS
BELOW THE TRIGGER LEVEL

JCS Support Option 1: Do not press for the right to conduct CORRTEX measurements if the testing party does not plan to test above the trigger level.

The decision to use 50kt as the trigger for implementing CORRTEX was based upon the belief that technically this level would ensure the Soviets could not violate the treaty simply by not notifying the US of a test. NTM would provide sufficient information to alert decisionmakers to a violation of the 50kt trigger. Providing the Verifying Party the right to measure the yields of "two nuclear weapon tests whose yields are the highest declared by the Testing Party that year" has nothing to do with verifying the 150kt threshold of the TTBT. [redacted] the purpose of this protocol is to ensure Soviet compliance of the 150kt provision of the TTBT.

[redacted] Further, such a provision will be ineffective in calibrating the seismic network for the entire test site over the range of yields of concern. Statements to the contrary, that the "two below" provision will calibrate the seismic network, could result in further claims that the United States has the seismic capability to verify reduced thresholds and thereby support calls for an intermediate nuclear testing limitation and possibly a CTB.

CIA 1.4(c)

DOS
NO RECOMMENDATION

[redacted]