

File Disarmament
NEW PROPOSALS FOR CONTROL OF ATOMIC WEAPONS

Cliff
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This paper is intended to be controversial. It is therefore one sided, opinionated and erroneous.

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SUMMARY

The western nations have several natural disadvantages in atomic warfare, these are:

- 1) greater vulnerability because of more centralization and specialization, greater dependence on power and transport,
- 2) possibility of sneak attack, and
- 3) dependence on overseas transport and possibly beach-head landings in warfare.

When the Russian stockpile reaches 500, we cannot compensate for these disadvantages even by an unlimited supply of bombs as a saturation effect occurs.

Consequently, military defense planning should not be based on atomic weapons which we may not dare to use; we should attempt to minimize our natural disadvantages in atomic warfare and we should seek to eliminate stockpiles of atomic weapons.

The previous plan for control of atomic energy presented by the United States was not accepted, it left us in an uncertain moral position and it is now obsolete. A new effort is needed to eliminate stockpiles which are now to our disadvantage.

A new plan is presented based on:

- 1) Accepting the Russian proposal for international inspection and destruction of stockpiles,

DOE review(s) completed.

State Dept. review completed

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- 2) Specifying the inspection required, and
- 3) Progressive elimination of stockpiles during a period of 30 weeks.

This plan is to our advantage if accepted or rejected. It should be negotiated in private to permit concessions. No plan can more than postpone the use of atomic weapons, so decentralization is still urgently needed.

INTRODUCTION

Almost seven years have passed since the "Agreed Declaration" of November 15, 1945, was issued by the President of the United States and the Prime Ministers of the United Kingdom and Canada. This declaration which committed the United States to "seek by all reasonable means to bring about international arrangements to prevent the use of atomic energy for destructive purposes" was based on three major considerations. These were:

- 1) The development of atomic energy has placed at the disposal of mankind means of destruction hitherto unknown,
- 2) There can be no adequate military defense against atomic weapons, and
- 3) These are weapons "in the employment of which no single nation can in fact have a monopoly".

Shortly thereafter (Jan. 23, 1946) a board of consultants began its work on the formulation of a plan for the international control of atomic energy. This report, issued March 16, 1946, confirms the three points of the "Agreed Declaration" and adds a fourth: "Our political institutions, and the historically established reluctance of the United States to take the initiative in aggressive warfare, both would seem to put us at a disadvantage with regard to surprise use of atomic weapons. This suggests that although our present position, in

3.

which we have a monopoly of these weapons, may appear strong, this advantage will disappear and the situation may be reversed in a world in which atomic armament is general".

Another point which was recognized at an early date was that the United States and the western powers are more vulnerable to atomic warfare than Russia because of their higher degree of concentration in cities and higher dependence on the proper functioning of a complex technology. Accordingly, the need for a gradual decentralization to reduce our vulnerability was apparent.

The developments of seven years have only confirmed these major premises. Present day thinking is based on the utilization of hundreds or thousands of bombs instead of tens or hundreds, further emphasizing point one. General Vandenberg estimated that even a conventional attack by World War II type bombers would be 75 percent successful (Sat. Eve. Post). The Russians have demonstrated the truth of point 3, which was considered to be the most controversial in 1946.

Unfortunately, the remarkable foresight of 1946 did not lead to action of equal merit. Today, in 1952, there is no decentralization, no improvement in international relations, no adequate defense, no control of atomic energy and the time has already arrived when the Russian stockpile could cause a major catastrophe in this country. Yet at this time the public appears satisfied because the United States has built even more bombs and made some feeble efforts toward organizing a Civilian Defense group to clean up the debris. On this basis a man would be pleased at the prospect of a duel because he had the

4.

foresight to buy ten pistols and make arrangements with his undertaker.

It is apparent that the time is here when the existence of atomic weapons is a decided military disadvantage to the United States. Consequently, we should direct our efforts towards formulating a new proposal for the control of atomic weapons. Whatever the merit of the original proposal, it is damned by the simple fact that it was not accepted.

MILITARY DISADVANTAGES OF ATOMIC WEAPONS

1. American use of atomic weapons.

a) Destruction of Russian cities. Apart from considerations of whether this method of warfare is too evil to be used, the amount of damage is limited not only by the number of bombs available but also by the number of targets and the means of transporting the bombs. There is a point of diminishing returns and it seems highly doubtful whether it would be worth transporting the 1000th bomb to Russia.

b) Tactical use for defense of Europe. Targets which would merit use of atomic weapons are rare and would become even more so if bombs were used, consequently, 1000 would appear more than ample.

c) Submarines and submarine bases. Submarines are more difficult to detect than to destroy after detection. Consequently atomic bombs would only be useful in cases where a verified contact was made and lost. Submarine bases are limited in number, so one thousand more bombs should surely be ample for tactical use by the Navy.

d) Hydrogen bombs - only a few Russian targets are large enough to merit larger bombs. Consequently, the hydrogen bomb is a completely wasted

5.

effort. Worse still it will accelerate the Russian development of a hydrogen bomb.

Conclusion: Bombs beyond No. 3000 are completely worthless and can't even be sold as surplus. 1/ Even worse, if several thousand bombs are used there may be some widespread toxic effects.

2. Russian uses.

Consider the number of Russian bombs required to overcompensate even an unlimited American supply.

a) American and European cities. 300 bombs deliverable to American and European cities should be sufficient to deter the United States from starting city bombing.

b) Shipping and harbors. Any war with Russia will require an enormous overseas transport. 200 bombs reserved for shipping and harbors would more than compensate for tactical advantages of the United States side (anti-submarine weapon).

c) Break through. 100 bombs reserved for use in breaking through strong positions should eliminate the need of massed divisions.

d) Beach-heads. 50 bombs reserved for beach-heads should make landing operations even worse than usual.

Conclusion: 650 Russian bombs are sufficient to put us at a military disadvantage even if we had an unlimited supply. We

1/ If intercontinental guided missiles are used, several thousand bombs may be needed to hit a particular target.

6.

cannot win by having bigger stockpiles. Air defense must be prepared for all types of attack at all times and quickly reaches a point of diminishing returns. As the Russian stockpile is now quoted in the papers at 150 we should lose no time in making every effort to eliminate these stockpiles.

PREVIOUS ATTEMPTS AT CONTROL

1. Lilienthal-Acheson Plan.

This plan was designed to be as air tight as possible to prevent small leaks which might accumulate sufficient material to fabricate a few bombs. It overemphasized the difficulty of getting intelligent inspectors. This was fallacious for the AEC has demonstrated that people with physics training can be hired to do dull jobs. It did not recognize that a major attack utilizing several hundred bombs is a major operation and detectable. It demanded a lot from the Russians and offered as bait the "know-how" of atomic energy which we now realize was not as attractive to them as we thought. Perhaps it was a good offer at the time but it was not acceptable then and is even less acceptable at present when the score is perhaps 1000-100 instead of 20-0.

2. Russian Proposal.

Western objections to the Russian proposals were:

- a) Outlaw bombs first - control second.
- b) Veto in security council.
- c) No details on inspection procedures.

The first two questions are meaningless and were finally conceded by the Russians in 1948. The Russians never provided any detailed mechanisms for inspection, but on our side, no inspection procedures were proposed based on the general principles of the Russian plan.

7.

Russian side.

It seems clear that we had no real intention of giving up our only military advantage and the Russians were willing to wait until they caught up with their production. Furthermore, in the open forum debate neither side was willing to compromise for fear of appearing to "back down".

BASIC ASSUMPTIONS OF NEW PLAN

1) Any degree of control or even warning system which can be obtained is better than the present situation.

2) As recognized in the 1945 "Agreed Declaration" no control plan can eliminate the use of atomic weapons in a major war. A country could start from scratch at the outbreak and produce bombs in two years. The best possible plan can only eliminate stockpiles and postpone for a while the use of atomic weapons.

3) It is highly doubtful that the Russians will accept any form of control or elimination of stockpiles as it would be to their disadvantage. Consequently the plan should be designed to do us good even if it is not accepted or if it is accepted but broken later on.

4) Discussion of the plan should not be held in open sessions as this prevents concessions and compromise. The plan should only be published after it has been accepted or rejected.

5) Even a plan that would only give one day's warning would be valuable. Populations could move and the air defense would not be caught with a Sunday morning hangover.

8.

6) The major problem is to eliminate large stockpiles. A few (10) hidden bombs are unimportant. Even a production facility operating at a capacity of 30-50 per month is much less dangerous than an accumulated stockpile. Such a plant could itself be bombed out. (If war broke out when we had no stockpile but Oak Ridge was operating, the Oak Ridge and not our cities would be the No. 1 target).

7) Atomic power is of no great value and could easily be sacrificed if necessary to eliminate atomic bombs.

8) International management of atomic energy, whether desirable or not, is clearly not acceptable to Russia and should not be considered.

9) A major atomic attack involves thousands of people and could be detected by the simplest control plans.

10) The practice of making reports and keeping records is such a deep-grained human habit that the size of stockpiles and the location of production facilities can be determined from the records.

11) A one-day warning could be achieved by simply locking up the stockpile of fissionable material under international control.

12) A one-week warning could be achieved if the same material was alloyed with some other metal.

13) Stockpiles could be eliminated by denaturing the fissionable material with non-fissionable isotopes. This would not interfere with "peaceful" uses and is stressed in the Acheson report. 2/

2/ It is not possible to calculate from unclassified data whether Plutonium can be denatured. If not it would have to be dumped in the ocean. If the Russians use Plutonium exclusively we could trade an equivalent quantity of denatured Uranium.

9.

14) A further delay of one to two years could be introduced by destruction of all piles and separation facilities. This would be nice but not essential.

15) We have more to gain than lose in exchange of information except about details of bombs.

From the considerations above a plan naturally follows.

1) Accept the Russian Proposal to outlaw and destroy bombs and simultaneously to establish controls.

2) Define the controls and inspection required. For example:

a) Access to all records of production etc. during phase 1 and thereafter at monthly intervals plus three unscheduled visits per year.

b) Access to all production facilities, assembly facilities and stockpiles during phase 2 and thereafter at weekly intervals, plus ten unscheduled visits per year.

c) Continuous surveillance of stockpiles under international control.

d) Inspection of entire country by air beginning at stage 2 and thereafter.

e) Outlawing and destruction of stockpiles by stages:

Stage 1: Deliver nuclear material of bombs to international control located within country at rate of 10 percent per week. (Also current production).

10.

- Stage 2: After all material is delivered to satisfaction of both sides, alloy 10 percent per week with another metal.
- Stage 3: After all material is alloyed, denature 19 percent per week.
- Stage 4: Dismantle production plants.

This plan would eliminate stockpiles in 30 weeks after adoption. It could hardly be accepted in less than six months so our stockpile would remain intact during the short time, if any, that remains when we have an advantage in atomic weapons. This plan is offered as an example only. The details of any actual plan would be worked out by negotiation.

ADVANTAGES AND DISADVANTAGES

- A. If the plan is not accepted it throws the blame clearly on the Russians as it is they, not we, who refuse their own plan. It definitely demonstrates that their proposals were not made in good faith.
- B. If the plan is accepted we eliminate stockpiles which is much to our advantage in the long run.
- C. If the plan breaks down during Stage 1 we gain some information concerning their stockpile and have a brief warning. This would involve some danger as a breakdown might be interpreted by either side as the starting signal.
- D. If the plan breaks down during stage 2 we have gained information on their production and assembly facilities.

11.

E. Russian acceptance of this plan seems doubtful but it is foolish to decide in advance that they will reject it. Possible reasons for their acceptance are:

1. We may have overestimated their stockpile and production rate.
2. This plan could be only a part of a larger disarmament scheme which would be acceptable.
3. Perhaps they are human and don't like the present state of the world either.

BEYOND THE PLAN

As no plan can more than postpone the use of atomic weapons in case of war and any plan may break down, we should begin to overcome the natural advantages which now lie with the Russians in atomic warfare.

1. Decentralize. There is sufficient investment in new houses, factories, etc. (Plan \$24 x 10⁹/year Bldgs. \$15 x 10⁹/year) to decentralize the country in a period of 10-20 years if these buildings were put in the right places. A program of highway improvement and tax incentives could achieve the desired results without red tape, federal planning and control. This would be beneficial to the country anyway.
2. We can accept the disadvantage of not being willing to make a sneak attack.
3. We should try to keep ahead in air defense even though it is a losing game.
4. Overseas transport systems should be revised to make them less vulnerable to submarines and atomic weapons. This should include the loading and unloading problems as well as protection on the seas and approaches to land.

Department of Terrestrial Magnetism
5241 Broad Branch Road, N. W.
Washington 15, D. C.