

CLASSIFICATION OR CHANGED TO *with deletion*
BY AUTHORITY OF *A. F. Connell*
~~OFFICE FOR EMERGENCY MANAGEMENT~~ *10-26-64*

~~SECRET~~

OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT
1530 P STREET NW. UNITED STATES ATOMIC ENERGY COMMISSION
WASHINGTON, D. C.

VANNEVAR BUSH
Director

December 15, 1942. 120

TO: Hon. Henry A. Wallace, Vice President.
Hon. Henry L. Stimson, Secretary of War.
General George C. Marshall, Chief of Staff.

FROM: V. Bush, Chairman of Military Policy
Committee on Atomic Fission Bombs.

SUBJECT: Present Status and Future Program.

Gentlemen:

The last report on the development of bombs of extraordinary power was dated June 13, 1942. Since then the program has been vigorously pushed, and the ultimate possibilities, together with the difficulties, have become more clear. It is therefore opportune to present the present status of this matter, together with our recommendations for the future, and seek further instructions.

Organization

As a result of a conference held on September 23, at which among others the following were present:

- The Secretary of War
- The Chief of Staff, U. S. Army
- Dr. V. Bush, Director of the OSRD
- Dr. J. B. Conant, Chairman of the NDRC

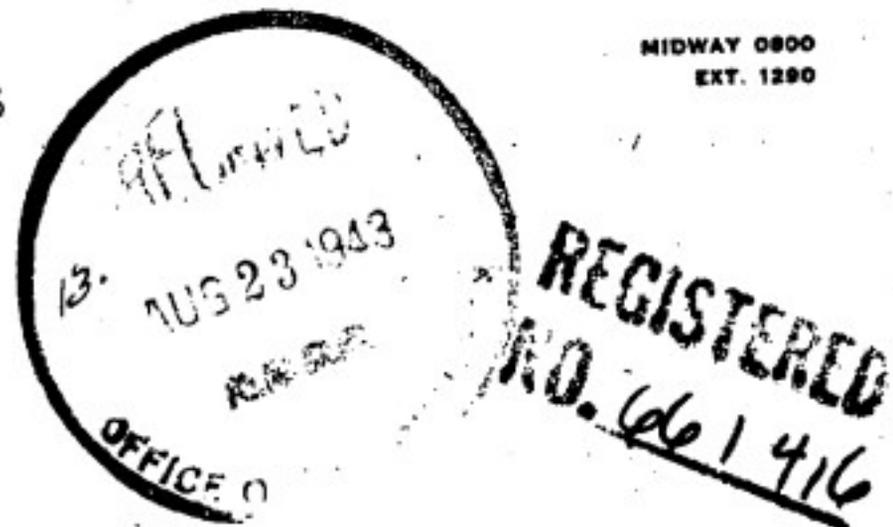
water is at the basis of one of the most promising methods of proceeding toward power uses, and, as has been realized more recently, also toward an explosive. We do not know, unfortunately, just how much progress they have made. On the basis of our own time schedule, and the difficulties of the whole affair, which test our own scientific and technical skill to the utmost, it is believed to be highly improbable that Germany will be in a position to use such a weapon in 1943. It is entirely possible, however, that it may be six months or a year ahead in the over-all program due to the head start. We believe that American energy and resourcefulness can overcome such a handicap, if the race is long enough. Hence every technical obstacle that is encountered, if met both by ourselves and our enemy, is to be welcomed. Recent months have uncovered several such, none insurmountable. We have no reason to believe that Japan, in such a race, would be a competitor comparable to Germany. It must be realized, however, that almost no real information is available, and comparisons are hence nearly pure speculation.

Metallurgical Laboratory

August 20, 1943

MIDWAY 0800
EXT. 1290

Dr. James E. Conant
1530 P Street, N. W.
Washington 25, D. C.



Dear Dr. Conant:

I have gone over the draft of the report which you have written for General Groves with regard to the military use of radioactive materials. With regard to most of this report I am in complete agreement. I am not, however, prepared to go as far as you have done in discounting the probability of enemy attack by this method. I have attached to the report some comments which could be inserted, if you and Urey are agreeable, that would enable me in good conscience to sign the report.

I have also made some marginal notes of minor character on your manuscript which will explain themselves.

The fact is that it seems to me there is a real likelihood that the enemy can and will attack us with radioactive weapons within the next six months. Though I would not want to rate the chances of such an attack as high as even odds, it seems to me, nevertheless, sufficiently probable that we should make a real effort not to be taken by surprise. Perhaps the recent announcement of a secret weapon to be released in November is merely an invitation for us to reveal what we ourselves have along this line. It may on the other hand be the beginning of a propaganda build-up looking toward producing a disastrous effect upon Allied morale. In any case, it would seem to me important to be prepared with appropriate precautions such as you have emphasized in your draft of the report and also to be ready to reply in kind. Such a reply would have the effect both of giving assurance to our own soldiers and civilians and discouraging the enemy by letting him know that much worse things may follow if the war is continued.

The fact is that we can reply in kind before Christmas if this is considered military strategy. Though the reply would not be itself of any decisive military significance, it might be of real psychological value and its possibility should accordingly be brought to the attention of the General Staff.

Notes on "Report of Sub-committee of the S-1 Committee on the use of radioactive material as a military weapon." by Arthur H. Compton.

Page 8. Should not the studies of effectiveness of various methods of distributing radioactive materials be initiated immediately if it is to be of value?

Page 9. Note marginal comment indicating the probability that for effect on morale the enemy may attempt attack on cities by radioactive material.

Page 10. In addition to equipping each division headquarters with means of measuring radiation, and training a man to advise on required troop movements, should not each unit of 100 or so men have suitable detecting devices? These devices would probably consist of photographic films, handled by the medical officer.

Should not the issuance of such more generally used detecting devices be recommended, in addition to the equipment and instruction of an officer in each division?

This would emphasize the immediacy and importance of the work of the committee proposed on Page 11.

Page 12. For its psychological effect, use of radioactive poisons by the enemy before they expect us to be ready would presumably be the preferred strategy. An estimate of the best time schedule possible for the Germans indicates that they might be ready to use radioactive materials in quantity by the autumn of 1943. Thus an attack within the next few months may be expected if it is to be made at all. Immediate preparations for reply accordingly become important unless there are reasons, unknown to us, for discounting the probability of use of radioactive warfare by the enemy.

Perhaps the most effective reply would be to answer immediately in kind. This would warn the Germans that we are prepared for their "surprise" with the implication that we will follow through as far as is necessary for victory. If their's is a hope born of desperation, such a reply might lead to early surrender.

TOP SECRET

TUBE ALLOYS

Aide-memoire of conversation between the President and the Prime Minister at Hyde Park, September 18, 1944. (Notations: Actually 19th)

1. The suggestion that the world should be informed regarding Tube Alloys, with a view to an international agreement regarding its control and use, is not accepted. The matter should continue to be regarded as of the utmost secrecy; but when a "bomb" is finally available, it might perhaps, after mature consideration, be used against the Japanese, who should be warned that this bombardment will be repeated until they surrender.
2. Full collaboration between the United States and the British Government in developing Tube Alloys for military and commercial purposes should continue after the defeat of Japan unless and until terminated by joint agreement.
3. Enquiries should be made regarding the activities of Professor Bohr and steps taken to ensure that he is responsible for no leakage of information, particularly to the Russians.

F.D.R. W.C.

Notes: A copy of this aide-memoire was left with President Roosevelt. Another copy was given to Admiral Leahy to hand to Lord Cherwell.

To me this view seems fatally false, and one which I must oppose with all the influence I can bring to bear. I am convinced that both the 1939 war and the 1914 war would have been prevented had the United States been prepared for war and had indicated clearly its intention to fight an aggressor. Certainly the scrapping of our battleships was the occasion for the Japanese preparations to fight us. If we attempt to outlaw atomic bombs we shall only repeat the opportunity for an outlaw nation to develop such weapons for the destruction of the rest of the world. The answer is to outlaw war itself; and this can be done, I believe, only by a strong world "police" which has at its disposal more powerful weapons than the renegade nation can hope to acquire. Since, for the time being, only we are able to produce such weapons, it is our task to see that they are available for the world "police."