May 24, 1945

The Hon. Harry L. Stimson
Secretary of War
War Department
Washington, D.C.

My dear Mr. Secretary:

Attached is a copy of a communication directed to the President on a subject in which I know you are deeply interested. With your long record as one of the few real statesmen in our country, it is perhaps presumptuous of me to ask you even to consider the ideas of one who admittedly has no knowledge of international affairs. This matter is, however, so extremely grave that I believe every opinion should be scrutinized before the solution is reached, and I therefore submit this communication for your consideration.

Most respectfully,

[Signature]

Attachment

[Classification notation]
May 21, 1945

The President of the United States

The White House

Washington, D. C.

Order Sec. Army by Cal. 16

My dear Mr. President:

Presented herewith is a matter which I believe to be one of the gravest, if not the gravest, questions now confronting the United States and the entire world. It has to do with the policy to be adopted as to the future handling of the Clinton Engineer Works (near Knoxville, Tennessee) and associated projects. This communication is being directed to you through the special channels provided by the Army for material on this subject, but this fact should in no way be construed as Army endorsement of any of the ideas presented but is merely in recognition of my right as a citizen to bring these ideas before you, and on my part it is so done in recognition by me of the continued urgent necessity for the security of this undertaking and my compulsion to avoid any act that would jeopardize that security. Copies of this communication have also been directed to the Secretaries of State and of War through the same channels in the belief that it is proper to bring the matter before them at the same time that it is presented to the President.

This matter is presented with the full knowledge on my part that it is undoubtedly being given very serious attention already by far better minds than mine and yet I know myself to hold the unpopular and minority view on the question and therefore feel it my duty as a loyal citizen to attempt to place before you these ideas on the chance that they have not been presented to you before and on the further chance that, while I can lay no claim to any knowledge of statesmanship, world politics, some of these ideas may turn out to be correct and of importance to world peace. The spirit is that of such appealing urgency that I would be demaclist in my duty in not bringing it to your attention in the absence of definite information that it was being fully considered from all points of view.

I have been associated with this project since February 1942 as an engineer with The Kallex Corporation, and, while not in possession of all the facts under the wise ruling that for the sake of security no one should have such knowledge, I do know enough about it to realize its possible effect upon our modern civilization and I have given a great deal of thought to it over the past three years. My knowledge of the so-called "W-35" plant (that engineered by The Kallex Corporation and now going into operation under Carbide and Carbon Chemicals Corporation) is quite detailed and specific, but as to the other projects—Tennessee-Eastman (X-12 and X-10), DuPont (in Washington State), Farno (S-30), and Chicago University on and use (in Texas, I believe)—my information is second hand and general and may be inaccurate although obtained from informed sources. Moreover I am not qualified as a physicist to judge as to the correctness of the estimates of the possible effectiveness of the material involved and there again I can only pass on what I have been told and believe to be substantially true.

O. C. G. BOWTER

NEW YORK

[Signature]

DENYING AT 12 YEAR INTERVAL

NOT AUTOMATICALLY DECLASSIFIED

REDUCED UNCLASSIFIED

O. C. G. BOWTER

NEW YORK

[Signature]
In order to present my views adequately I feel forced to go into rather extensize detail, with much of which you are already undoubtedly familiar, in order that the facts on which I base my conclusions may be verified so that if my information is faulty my conclusions may be accordingly discounted.

The project as a whole is a mammoth undertaking on which many hundreds of millions of dollars are being spent and hundreds of thousands of people are directly or indirectly involved. It is rapidly approaching completion—wherein lies great danger, as I hope to show—and represents a modern milestone of science and engineering and even today, unfinished, shows enough promise of success to stand as a monument to the genius of the man whose tireless devotion has, in the face of almost insuperable difficulties, delay, and discouragement, brought it to its present state.

The purpose of the project is to produce in useable quantities the one known material from which can be liberated, by selection of the atom, energy locked up in the atom in such huge quantities relative to the weight of material handled that it is impossible to grasp its full significance. On my introduction to the project I was told that one fifty pound bomb utilizing this material would be equivalent to twelve thousand tons of TNT—in other words, about five hundred thousand times as effective, pound for pound. Furthermore such a bomb would completely destroy an area the equivalent of Manhattan and, due to induced radioactivity, all life in this area would be impossible for a period of years. I have been told that this estimate is a gross exaggeration, but I have also been told that experimental work is demonstrating the material to be usable with something approaching its theoretical potentiality and that all signs pointed to its living up to expectations as an explosive. My work is not involved with the excess of the material and I have made no effort to verify these facts. The exact figure is of little importance—if its effectiveness were only five hundred times that of TNT instead of five hundred thousand, my conclusions would only be in error to a degree.

This material, under controlled conditions, also has tremendous potentiality as a concentrated fuel for power generation, one pound being equivalent to many tons of coal or oil, making possible a revolution in ship propulsion as an example.

While much of this was known for several years before the war and much was written on the subject, no serious effort to produce this material in anything but microscopic quantities was made until, under the compulsion of war, the effort became necessary. This is due to the enormous difficulty in its production, as it involves the separation of a relatively small portion of a fairly rare metal by separating means which are very difficult. The result is that a plant to do this job on any worthwhile scale is so costly that no individual and few nations could undertake it and then only under the great stress of war when cost becomes a

---

Declassified Information in this document depicts activities described at the 1945 United Nations Conference at San Francisco wherein the United States, China, the Soviet Union, Britain, France, the Netherlands, Australia, and New Zealand were represented by their delegates and the United States was represented by the Secretary of War, Mr. Stimson, and the Secretary of the Navy, Mr. Forrestal. This document may be unavailable for release of information.
The President of the United States

May 24, 1945

The Clinton Engineer Works represents the effort of this country to produce this material, and since the whole undertaking was an enormous experiment for which at the start there was no assurance of success of any one of a number of proposed methods, all of these methods which showed any promise on a minute laboratory scale were undertaken in parallel in the hope that one at least might succeed. The "Y-12" plant, which had the chance of assuring production most quickly, was intended to supply only small quantities for research and experimentation but due to the shorter time element in its construction could yield invaluable data. The "K-25" plant was designed for relatively large production of the ultimate product but was later altered to produce material of only moderate concentration. The DuPont plant in Washington was also for large production, but I understand it has been a disappointment. "B-50" came along as a later idea and is a plant capable of producing in relatively large quantities but of unusually low concentration and is thus used to produce feed for "Y-12."

At present "Y-12" is in moderately successful production of sufficient material, I believe, for experimental purposes. K-25 is in partial operation, producing a large quantity of material of low concentration which is being used as feed to "Y-12," thereby augmenting its production of highly concentrated product. K-25 is rapidly being pushed to completion and, as now set up, will upon completion and upon completion of K-27, a newly authorized addition to K-25, be able to furnish such a supply of moderately highly concentrated material that, when this is fed to Y-12, the ultimate production of highly concentrated material will be equal to or greater than that originally planned for K-25.

The K-25 plant, with which I am quite familiar, shows every prospect of success. Many units of this plant have been in operation for months and their performance exceeds expectations. Except for final proof by actual complete operation, the plant now stands as a vindication of the genius and skill of those who have given their untiring devotion to it through periods of greatest trial and discouragement. Nothing which I advocate as the policy to be pursued as to these plants is intended to detract in any way from the success of the patriotic effort which has been put into them.

The destructive possibilities of the material as I have described it are obvious. With aviation what it is today, it should be possible, with planes based in any country on the globe, to destroy at one fell swoop almost any great city in the world and wipe out the manufacturing, the fleets, and the supply bases of any other country without warning, thereby rendering it helpless almost before it realized it had an enemy.

The secondary producing such a weapon during the course of a war would gain such an enormous advantage over its enemy that victory would be almost assured regardless of its condition just prior to putting it to use. I do not know whether this weapon could be applied in sufficiently homeopathic doses to make it efficient against combat troops, but certainly against massed supplies, manufacturing centers, nations' capitals, and great cities the effectiveness is apparent.
Before we were forced into the war it was known that Germany was working to produce this material. It was known that a great horde of her ablest physicists, chemists, and engineers had been drawn into the project. It was known and recognized that if Germany succeeded in this effort the victory was irreversibly Germany's and that the rest of the world could look to nothing other than slavery under the Nazi yoke.

Thus before our entry into the war the OSS had already started a research program looking toward the production of this material. After Pearl Harbor this program was enormously enlarged and with the cooperation of Britain, who was already at work, a fantastic race with Germany was begun, with the full knowledge that Germany had a head start of possibly as much as two years. Before the research was even well started enough encouraging results by several methods had been obtained that, without waiting for further development, full scale facilities for the large scale production of this material were started. The fact that any success at all was achieved constitutes the modern miracle I mentioned earlier because these plants were built on scanty research—they were built on hunch, on prayers, and on what at times appeared to be wishful thinking, but by dogged determination coupled with some of the most brilliant scientific and engineering work they have succeeded or given every promise of success and Germany for some reason, which I think all of us are entitled to know some day, has failed.

From my first association with this project I have been convinced, and have been appalled by the conviction, that the successful production of this material by any nation meant the inevitable destruction of our present day civilization. This is not an original thought with me but is shared by many of my associates. One of the most earnest hopes of many of us was that it might be proved that the thing was impossible. Obviously, however, so long as there was any chance that Germany might succeed at this task there was only one course to follow and that was to do everything in our power to get this thing first and to destroy Germany before she had a chance to destroy us. We must forget about the destruction of civilization or at least we must agree that, if civilization is to be destroyed, we should do it our way and prevent Germany from doing it the Nazi way. Thus this project became the most important thing of its kind before the country and still it remained, by what seems another miracle, one of the best kept secrets of our time.

The idea of the destruction of civilization is not melodramatic hysteria or crack-pot ravings. It is a very real and, I submit, almost inevitable result. It cannot, of course, be proven until it occurs—and then it would be too late.

The possession of this weapon by any one nation, no matter how benign its intentions, could not be tolerated by other great powers. Those who could not produce the weapon themselves would watch our every move. Our elections, our foreign policy, everything we did would be viewed with suspicion and distrust.
If we urged our views on the world on any subject we would be charged with threatening to use this weapon as a club. We would be held to that.

American isolationism, however, would be diametrically against our interests on the world. If we insisted on using our own self protection to prepare ourselves, we could not rest complacently if, say, Mexico, or France, or Russia, or even Britain were the sole possessors of this means of sudden destruction.

As I say, our intentions toward the world may be most benign, but if we insist on the country would get it—every country would eye every other country's actions, and sooner or later the spark would be struck that would send the whole world up in one flaming inferno of a third world war which would dwarf the horror of the present one.

There are further dangers. Repeating that our intentions may be most benign, the human mind and soul are far from perfect and the possession of great power is a corrupting influence which many men cannot resist. Even if the world, could in the course of time acquire the same Habsburg complex that led to the destruction of Germany—but which might lead to the destruction of the world in the next time. Going along a slightly different line, the possession of this power by our country would offer a prize more tempting to the corrupt and sanguinary than had ever been dangled before the eyes of man. Such a man, given the great ability which many of them have, could lay his plans with greatest care, could set aside twenty, thirty, or forty years to gain his end, could build his organization, attract his following and, with never a word of his real intention, finally get himself into power in this country and then, and only then, he could turn on us and the world and conquer it for his own insane satisfaction.

I would be supremely vain if I set myself up to say just what would happen, but I know that things such as I have mentioned could happen. I know the course of events might follow some other unpredictable track but with the same general cataclysmic result, and I know that if this thing exists on earth while man still has greed and hate and lust of power, I know as well as I know that God is in his heavens that something of this kind will happen without the slightest shadow of a doubt.
The President
of the United States

May 24, 1945

This thing must not be permitted to exist on this earth. We must not be the most hated and feared people on earth however good our intent may be. So long as the threat of Germany existed we had to proceed with all speed to accomplish this end. With the threat of Germany removed we must stop this project. Peace is possible, and we and we alone today have it in our power to bring peace to this earth for the first time and this very weapon which we have today almost in our grasp is the means whereby we can help to bring this about.

If this world has learned nothing from this war then we had best give up and revert to the dark ages. The world has learned at least that war must not happen again. But it will happen if this weapon, permitting a war to be fought and won possibly in a matter of days, if not hours, is found upon this earth.

I know nothing of statesmanship or diplomacy or power politics, but I believe we today can go before the world and say something like this:

"We now possess this weapon. We will show it to you and demonstrate what it can do. We will soon have it in quantity and can before any one can stop us be in a position to control and enslave the world.

"We do not want to do this. We do not care to rule the world. We want peace on earth, and we realize there can be no peace if this weapon exists.

"We therefore say to you that we will give up this weapon if you, the rest of the world, will so organize with us that no country on earth shall ever produce this material in a form which can be used for destructive purposes.

"We propose that every power on earth, great and small, shall agree that it shall not produce this material.

"We know that agreements are only made to be broken, so we further propose that this agreement be implemented somewhat as follows:

1. A group of international observers shall watch the industry of every country. The production of this weapon is such a gigantic undertaking that no country under these conditions could attempt to build the necessary plant in secret.

2. If any country starts this work the rest of the world shall as one take it over by force and prevent this thing from happening. The time necessary to build the plant would give time to do this.

3. All known sources of supply of the raw material shall be supervised by an international commission and every pound of the raw material be accounted for. (The sources of raw material in quantity are few - Canada, Czechoslovakia, the Belgian Congo, and probably the Urals. The material is widely distributed in low grade deposits but the difficulty of recovery would be great and could be observed).
The President of the United States

May 24, 1945

4. Research (perhaps under international sponsorship) should continue as to the properties of the material and as to methods of production. Particular emphasis should be placed on a search for any easy and simple method since such a method, if it exists, as it well may, would greatly increase the hazard and make necessary more rigid control.

5. The use of this material for power may be permitted if it can be conclusively proven that when in form usable for power it cannot be used for destruction and cannot be used as the first and perhaps most difficult stage of manufacture for destructive purposes.

"We are showing you our good faith in this by having stopped our plant almost on the point of success. We are prepared to proceed with this plant and will proceed and finish it if world agreement is not reached. We will in self defense proceed against any nation which we believe is building a similar plant."

I believe something like that, in substance, would get the desired result. I am sure Britain and France would gladly fall in line, and I have enough faith in human nature to believe that Russia would see the light and agree to the restraints and supervision which at present appear repugnant to her. Germany and later Japan can, of course, be forced to abide by the program.

Many of us are so afraid of Russia we fairly jump when the name is mentioned. I pretend to know nothing of Russia, but surely she has learned that war is a sorry business and surely it must be possible to convince her that this must be done.

**********

The war with Japan goes on and I have almost been accused of treason by some for proposing the stoppage of this work before Japan is brought to terms. This is not my idea. The present facilities are, I believe, capable of producing in the near future an amount of the material sufficient to serve as a demonstration, and I see no reason why Japan should not serve as the target for such demonstration. I question whether added production would be necessary to bring about the surrender of Japan. This is of course a matter of opinion wherein my opinion is admittedly not well informed.

On the other hand, the full plant—utilizing K-27 only recently undertaken—cannot be in production until 1946 and when its production would be ready for use is something I do not know, but I think it likely that it will certainly be post-war.

I do not of course want to propose anything to jeopardize the war with Japan, but, terrible as it may seem, I know that it would be better to take greater casualties now in conquering Japan than to bring upon the world the tragedy of unrestrained competitive production of this material.

**********

ORDER SEC ARMED BY TAG FERN

7-21-44

72116A
The President
of the United States

May 24, 1945

It is obvious that many other better minds than mine are earnestly considering this problem, but I am sincerely disturbed by the following considerations. From its very nature this project has been and must be wrapped in the greatest secrecy. Only a small proportion of those working on the project really know what we are making. For that reason the only people who know about it are those who are most deeply interested in it. The men of the Corps of Engineers, the CEN, the scientists, engineers, and manufacturers who have given their all to make this thing a success—none of us are capable of viewing the problem objectively and disinterestedly and therefore are not the proper ones to advise or decide what should be done.

Without discrediting the humanitarianism or honesty of the Army at all, surely it is not the one to decide the future course of this project. Such a weapon is the answer to all the prayers of the professional soldier. He cannot be expected to forgo willingly such a potent means of bringing victory to or preparing the defense of his country.

The rest of us—the civilians in the project—are so intent on making it succeed that the suggestion that it should be stopped is rank heresy, if not treason, to most.

But these are practically the only people who know about it and therefore the only ones who can think about it. Also there is the old saw of the scientist that "you cannot stop progress." In this case I disagree, if indeed it be "progress," since the task of manufacture is so great that it can be controlled and stopped if the world as a whole can be made to agree that this must be done.

It therefore seems to me most urgent, Mr. President, that you should consult with others before it is concluded that this project should proceed full force according to the views of the great majority of those who know about it. In the name of the future of our country and of the peace of the world, I beg you, sir, not to pass this off because I happen to be an unknown, without influence or name in the public eye. I am definitely in the small minority of those now in a position to form an opinion on this matter. I respect and maintain the right of those who oppose me to transfer opinion just as I respect my opinion, but I do not believe that any of us can offer sound disinterested counsel on this question.

There surely are men in this country, however, to whom you could turn, asking them to study this problem, secure the facts, and come to a conclusion unbiased by their own deep and sincere interest in the project. Only on the judgment of such men could there be faith that full consideration had been given to all sides of this desperately grave question. I hope I do not appear presumptuous in this, but I assure you I have full faith and confidence, and that the whole country has full faith and confidence, in you in fulfilling the enormous task that has beenfallen you and that you are going to lead us.
The President of the United States

May 24, 1945

and with us the world into an era of lasting and just peace and security and that you are the best judge as to where and to whom you should turn in solving the multitude of problems which no man can be expected to solve unaided.

Most respectfully submitted,

[Signature]

O.C.

ORDER SEC ARMY BY TAG PER 721164

[Redacted]
May 30, 1945

The Secretary of War

Dear Mr. Marshall,

Here is a letter which I have just received this afternoon and which I should like you to read before tomorrow's meeting at 10 o'clock. I think it is the letter of an honest man, and I was sent to the President, the Scott of Fiddle and myself, through the usual security channels. I think it a remarkable document and for that reason wish you to have the opinion of its logic, before the meeting.

Yours, Bundy, Harriman and I are
the only ones who have seen it.

I shall take the President's copy to him personally or through Bynoe who will
be here tomorrow.

Yours 11.28