

IMMEDIATE RELEASE

WAR DEPARTMENT
Washington, D. C.

STATEMENT OF THE SECRETARY OF WAR

The recent use of the atomic bomb over Japan, which was today made known by the President, is the culmination of years of herculean effort on the part of science and industry working in cooperation with the military authorities. This development which was carried forward by the many thousand participants with the utmost energy and the very highest sense of national duty, with the greatest secrecy and the most imperative of time schedules, probably represents the greatest achievement of the combined efforts of science, industry, labor, and the military in all history.

The military weapon which has been forged from the products of this vast undertaking has an explosive force such as to stagger the imagination. Improvements will be forthcoming shortly which will increase by several fold the present effectiveness. But more important for the long-range implications of this new weapon, is the possibility that another scale of magnitude will be evolved after considerable research and development. The scientists are confident that over a period of many years atomic bombs may well be developed which will be very much more powerful than the atomic bombs now at hand. It is abundantly clear that the possession of this weapon by the United States even in its present form should prove a tremendous aid in the shortening of the war against Japan.

The requirements of security do not permit of any revelation at this time of the exact methods by which the bombs are produced or of the nature of their action. However, in accord with its policy of keeping the people of the nation as completely informed as is consistent with national security, the War Department wishes to make known at this time, at least in broad dimension, the story behind this tremendous weapon which has been developed so effectively to hasten the end of the war. Other statements will be released which will give further details concerning the scientific and production aspects of the project and will give proper recognition to the scientists, technicians, and the men of industry and labor who have made this weapon possible.

The chain of scientific discoveries which has led to the atomic bomb began at the turn of the century when radio-activity was discovered. Until 1939 work in this field was world-wide, being carried on particularly in the United States, the United Kingdom, Germany, France, Italy and Denmark.

Before the lights went out over Europe and the advent of war imposed security restrictions, the fundamental scientific knowledge concerning atomic energy from which has been developed the atomic bomb now in use by the United States was widely known in many countries, both Allied and Axis. The war, however, ended the exchange of scientific

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information on this subject and, with the exception of the United Kingdom and Canada, the status of work in this field in other countries is not fully known, but we are convinced that Japan will not be in a position to use an atomic bomb in this war. While it is known that Germany was working feverishly in an attempt to develop such a weapon, her complete defeat and occupation has now removed that source of danger. Thus it was evident when the war began that the development of atomic energy for war purposes would occur in the near future and it was a question of which nations would control the discovery.

A large number of American scientists were pressing forward the boundaries of scientific knowledge in this fertile new field at the time when American science was mobilized for war. Work on atomic fission was also in progress in the United Kingdom when the war began in Europe. A close connection was maintained between the British investigations and the work here, with a pooling of information on this as on other matters of scientific research of importance for military purposes. It was later agreed between President Roosevelt and Prime Minister Churchill that the project would be most quickly and effectively brought to fruition if all effort were concentrated in the United States, thus ensuring intimate collaboration and also avoiding duplication. As a consequence of this decision, a number of British scientists who had been working on this problem were transferred here in late 1943, and they have from that time participated in the development of the project in the United States.

II.

Late in 1939 the possibility of using atomic energy for military purposes was brought to the attention of President Roosevelt. He appointed a committee to survey the problem. Research which had been conducted on a small scale with Navy funds was put on a full scale basis as a result of the recommendations of various scientific committees. At the end of 1941 the decision was made to go all-out on research work, and the project was put under the direction of a group of eminent American scientists in the Office of Scientific Research and Development, with all projects in operation being placed under contract with the OSRD. Dr. Vannevar Bush, Director of OSRD, reported directly to the President on major developments. Meanwhile, President Roosevelt appointed a General Policy Group, which consisted of former Vice President Henry A. Wallace, Secretary of War Henry L. Stimson, General George C. Marshall, Dr. James B. Conant, and Dr. Bush. In June 1942 this group recommended a great expansion of the work and the transfer of the major part of the program to the War Department. These recommendations were approved by President Roosevelt and put into effect. Major General Leslie R. Groves was appointed by the Secretary of War to take complete executive charge of the program and was made directly responsible to him and the Chief of Staff. In order to secure continuing consideration to the

military aspects of the program, the President's General Policy Group appointed a Military Policy Committee consisting of Dr. Bush as Chairman with Dr. Conant as his alternate, Lt. General Wilhelm D. Styer, and Rear Admiral William R. Furnell. This Committee was charged with the responsibility of considering and planning military policy relating to the program including the development and manufacture of material, the production of atomic fission bombs, and their use as a weapon.

Although there were still numerous unsolved problems concerning the several theoretically possible methods of producing explosive material, nevertheless, in view of the tremendous pressure of time it was decided in December 1942 to proceed with the construction of large scale plants. Two of these are located at the Clinton Engineer Works in Tennessee and a third is located at the Hanford Engineer Works in the State of Washington. The decision to embark on large scale production at such an early stage was, of course, a gamble, but as is so necessary in war a calculated risk was taken and the risk paid off.

The Clinton Engineer Works is located on a Government reservation of some 59,000 acres eighteen miles west of Knoxville, Tennessee. The large size and isolated location of this site was made necessary by the need for security and for safety against possible, but then unknown, hazards. A Government-owned and operated city, named Oak Ridge, was established within the reservation to accommodate the people working on the project. They live under normal conditions in modest houses, dormitories, hutments, and trailers, and have for their use all the religious, recreational, educational, medical, and other facilities of a modern small city. The total population of Oak Ridge is approximately 78,000 and consists of construction workers and plant operators and their immediate families; others live in immediately surrounding communities.

The Hanford Engineer Works is located on a Government reservation of 430,000 acres in an isolated area fifteen miles northwest of Pasco, Washington. Here is situated a Government-owned and operated town called Richland with a population of approximately 17,000 consisting of plant operators and their immediate families. As in the case of the site in Tennessee, consideration of security and safety necessitated placing this site in an isolated area. Living conditions in Richland are similar to those in Oak Ridge.

A special laboratory dealing with the many technical problems involved in putting the components together into an effective bomb is located in an isolated area in the vicinity of Santa Fe, New Mexico. This laboratory has been planned, organized, and directed by Dr. J. Robert Oppenheimer. The development of the bomb itself has been largely due to his genius and the inspiration and leadership he has given to his associates.

Certain other manufacturing plants much smaller in scale are located in the United States and in Canada for essential production of

needed materials. Laboratories at the Universities of Columbia, Chicago, and California, Iowa State College, and at other schools as well as certain industrial laboratories have contributed materially in carrying on research and in developing special equipment, materials, and processes for the project. A laboratory has been established in Canada and a pilot plant for the manufacture of material is being built. This work is being carried on by the Canadian Government with assistance from, and appropriate liaison with, the United States and the United Kingdom.

While space does not permit of a complete listing of the industrial concerns which have contributed so signally to the success of the project, mention should be made of a few. The du Pont de Nemours Company designed and constructed the Hanford installations in Washington and operate them. A special subsidiary of the M. W. Kellogg Company of New York designed one of the plants at Clinton, which was constructed by the J. A. Jones Company and is operated by the Union Carbide and Carbon Company. The second plant at Clinton was designed and constructed by the Stone and Webster Engineering Corporation of Boston and is operated by the Tennessee Eastman Company. Equipment was supplied by almost all of the important firms in the United States, including Allis-Chalmers, Chrysler, General Electric, and Westinghouse. These are only a few of the literally thousands of firms, both large and small, which have contributed to the success of the program. It is hoped that one day it will be possible to reveal in greater detail the contributions made by industry to the successful development of this weapon.

Behind these concrete achievements lie the tremendous contributions of American science. No praise is too great for the unstinting efforts, brilliant achievements, and complete devotion to the national interest of the scientists of this country. Nowhere else in the world has science performed so successfully in time of war. All the men of science who have cooperated effectively with industry and the military authorities in bringing the project to fruition merit the very highest expression of gratitude from the people of the nation.

In the War Department the main responsibility for the successful prosecution of the program rests with Major General Leslie R. Groves. His record of performance in securing the effective development of this weapon for our armed forces in so short a period of time has been truly outstanding and merits the very highest commendation.

III.

From the outset extraordinary secrecy and security measures have surrounded the project. This was personally ordered by President Roosevelt and his orders have been strictly complied with. The work has been completely compartmentalized so that while many thousands of people have been associated with the program in one way or another no one has been given more information concerning it than was absolutely necessary

to his particular job. As a result only a few highly placed persons in Government and science know the entire story. It was inevitable, of course, that public curiosity would be aroused concerning so large a project and that citizens would make inquiries of Members of Congress. In such instances the Members of Congress have been most cooperative and have accepted in good faith the statement of the War Department that military security precluded any disclosure of detailed information.

In the appropriation of funds, the Congress has accepted the assurances of the Secretary of War and the Chief of Staff that the appropriations made were absolutely essential to national security. The War Department is confident that the Congress will agree that its faith was not a mistake. Because it has not been possible for Congress to keep a close check on the expenditure of the funds appropriated for the project which to June 30, 1945, amounted to \$1,950,000,000, key scientific phases of the work have been reviewed from time to time by eminently qualified scientists and industrial leaders in order to be certain that the expenditures were warranted by the potentialities of the program.

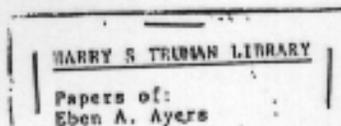
The press and radio of the nation, as in so many other instances, have complied wholeheartedly with the requests of the Office of Censorship that publicity on any phase of this subject be suppressed.

IV.

In order to bring the project to fruition as quickly as possible, it was decided in August 1943 to establish a Combined Policy Committee with the following membership: Secretary of War Henry L. Stimson, Dr. Varnevar Bush, and Dr. James B. Conant, for the United States; Field Marshal Sir John Dill and Colonel J. J. Llewellyn, for the United Kingdom;* and Mr. C. D. Howe, for Canada. The Committee is responsible for the broad direction of the project as between the countries. Interchange of information has been provided for within certain limits. In the field of scientific research and development full interchange is maintained between those working in the same sections of the field; in matters of design, construction and operation of large scale plants information is exchanged only when such exchange will hasten the completion of weapons for use in the present war. All these arrangements are subject to the approval of the Combined Policy Committee. The United States members have had as their scientific adviser Dr. Richard C. Tolman; the British members, Sir James Chadwick; and the Canadian member, Dean C. J. Mackenzie.

It was early recognized that in order to make certain that this tremendous weapon would not fall into the hands of the enemy prompt

* Colonel Llewellyn was replaced by Sir Ronald I. Campbell in December 1943 and the latter, in turn, by the Earl of Halifax. The late Field Marshal Sir John Dill was replaced by Field Marshal Sir Henry Maitland Wilson early in 1945.



action should be taken to control patents in the field and to secure control over the ore which is indispensable to the process. Substantial patent control has been accomplished in the United States, the United Kingdom, and Canada. In each country all personnel engaged in the work, both scientific and industrial, are required to assign their entire rights to any inventions in this field to their respective governments. Arrangements have been made for appropriate patent exchange in instances where inventions are made by nationals of one country working in the territory of another. Such patent rights, interests, and titles as are exchanged, however, are held in a fiduciary sense subject to settlement at a later date on mutually satisfactory terms. All patent actions taken are surrounded by all safeguards necessary for the security of the project. At the present stage of development of the science of atomic fission, uranium is the ore essential to the production of the weapon. Steps have been taken, and continue to be taken, to assure us of adequate supplies of this mineral.

V.

Atomic fission holds great promise for sweeping developments by which our civilization may be enriched when peace comes, but the overriding necessities of war have precluded the full exploration of peacetime applications of this new knowledge. With the evidence presently at hand, however, it appears inevitable that many useful contributions to the well-being of mankind will ultimately flow from these discoveries when the world situation makes it possible for science and industry to concentrate on these aspects.

The fact that atomic energy can now be released on a large scale in an atomic bomb raises the question of the prospect of using this energy for peaceful industrial purposes. Already in the course of producing one of the elements much energy is being released, not explosively but in regulated amounts. This energy, however, is in the form of heat at a temperature too low to make practicable the operation of a conventional power plant. It will be a matter of much further research and development to design machines for the conversion of atomic energy into useful power. How long this will take no one can predict but it will certainly be a period of many years. Furthermore, there are many economic considerations to be taken into account before we can say to what extent atomic energy will supplement coal, oil, and water as fundamental sources of power in industry in this or any other country. We are at the threshold of a new industrial art which will take many years and much expenditure of money to develop.

Because of the widespread knowledge and interest in this subject even before the war, there is no possibility of avoiding the risks inherent in this knowledge by any long-term policy of secrecy. Mindful of these considerations as well as the grave problems that arise concerning the control of the weapon and the implications of this science for the peace of the world, the Secretary of War, with the approval of the President,

has appointed an Interim Committee to consider these matters. Membership of the Committee is as follows: The Secretary of War, Chairman; the Honorable James F. Byrnes, now Secretary of State; the Honorable Ralph A. Bard, former Under Secretary of the Navy; the Honorable William L. Clayton, Assistant Secretary of State; Dr. Vannsvaer Bush, Director of the Office of Scientific Research and Development and President of the Carnegie Institution of Washington; Dr. James B. Conant, Chairman of the National Defense Research Committee and President of Harvard University; Dr. Karl T. Compton, Chief of the Office of Field Service in the Office of Scientific Research and Development and President of the Massachusetts Institute of Technology; and Mr. George L. Harrison, Special Consultant to the Secretary of War and President of the New York Life Insurance Company. Mr. Harrison is alternate Chairman of the Committee.

The Committee is charged with the responsibility of formulating recommendations to the President concerning the post-war organization that should be established to direct and control the future course of the United States in this field both with regard to the research and developmental aspects of the entire field and to its military applications. It will make recommendations with regard to the problems of both national and international control. In its consideration of these questions, the Committee has had the benefit of the views of the scientists who have participated in the project. These views have been brought to the attention of the Committee by an advisory group selected from the leading physicists of the country who have been most active on this subject. This group is composed of Dr. J. R. Oppenheimer, Dr. E. O. Lawrence, Dr. A. H. Compton, and Dr. Enrico Fermi. The Interim Committee has also consulted the representatives of those industries which have been most closely connected with the multitude of problems that have been faced in the production phases of the project. Every effort is being bent toward assuring that this weapon and the new field of science that stands behind it will be employed wisely in the interests of the security of peace-loving nations and the well-being of the world.

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