MANHATTAN DISTRICT HISTORY

BOOK I - GENERAL
VOLUME 4 - AUXILIARY ACTIVITIES

CHAPTER 8 - PRESS RELEASES

cy 2 PART I MDH-1-4 Ch8 Part I

1325
1/16

MDH-1-4 C
Copy
copies

MANHATTAN DISTRICT HISTORY

BOOK I - GENERAL

VOLUME 4 - AUXILIARY ACTIVITIES

CHAPTER 8 - PRESS RELEASES

PART I

FOREWORD

This collection is bound in two separate parts for mechanical reasons. Part I (herewith) comprises those documents which can be conveniently bound at the top; Part II (in separate cover) comprises those documents which can be conveniently bound at the side.

The list of items which follows includes all documents in both Parts of this Chapter with those bound in Part II ~~being~~ identified by number and letter designations, thus: "2(a)".

LIST OF ITEMS

NO.	DATE	TITLE
28	8-8-45-	Comment Regarding Dr. Jacobson's Speculation Concerning Radioactivity.
29	9-8-45	Comment By Secretary Of War On Use Of Atomic Bomb.
30	11-8-45	Elaborate Security Measures Protected Secret Of Atomic Bomb.
31	11-8-45	Release of Smyth Report.
31(a)	8-45	A General Account Of The Development Of Methods Of Using Atomic Energy For Military Purposes Under The Auspices Of The United States Government (Smyth Report).
32	13-8-45	WACS Assigned to Manhattan Project.
33	15-8-45	Security To Be Uneffected By Cessation Of Hostilities.
34	9-9-45	Eye Witness Account Of Atomic Mission Over Nagasaki.
35	12-9-45	General Groves Awarded D.S.M.
36	14-9-45	President's Request That Unreleased Information Be Withheld From Publication.
37	19-9-45	Final News Conference Of Secretary Stimson.
38	29-9-45	Remarks By Secretary Of War At Army-Navy "E" Ceremonies At Oak Ridge.
39	9-10-45	Statement Of General Groves Before The House Military Affairs Committee.
40	9-10-45	Statement Of Secretary Of War Before The House Military Affairs Committee.
41	18-10-45	Statement Of Dr. J. R. Oppenheimer Before The House Military Affairs Committee.
42	20-10-45	Secretary Of War Welcomes Public Discussion Of Atomic Science If Confined To Subject Matter Of Smyth Report.
43	30-10-45	General Farrell Awarded D.S.M.
44	-	Statement To The Press By Secretary Of War Concerning May-Johnson Bill.
45	26-11-45	Awards To Officers Of Manhattan District.
46	10-12-45	Announcement Of Contemplated Joint Test Of Atomic Bombs.
47	4-2-46	New College Organized For High Ranking Officers Of Armed Services And State Department.
48	14-2-46	Statement By Secretary Of War Before The Senate Special Committee On Atomic Energy.

NO.	DATE	TITLE
49	20-2-46	Statement by General Groves Regarding Prevalence Of Loose Talk About Atomic Bomb Project.
50	4-3-46	Awards Presented To Scientists For Work On Atomic Bomb.
51	9-3-46	Radio Address By Secretary Of War On Atomic Energy.
52	13-3-46	Awards Presented To Atomic Bomb Scientists.
53	15-3-46	Summary Of Press Conference Conducted By Secretary Of War On Atomic Energy.
54	9-4-46	Medal For Merit Award To Dr. G. B. Kistiakowsky.
55	9-4-46	Reference To Report On The International Control Of Atomic Energy And To Possibility Of Denaturing Atomic Explosives.
55(a)	-	Report On The International Control Of Atomic Energy.
56	30-4-46	Soldier's Medal Awarded To Technician Third Grade J. D. Hoffman.
57	13-5-46	Publicity Proposed To Be Given To Atomic Bomb Tests.
58	15-5-46	Army And Navy Munitions Board Survey Of Underground Storage Sites.
59	21-5-46	Last Shipment Enroute For Atom Test At Bikini.
60	28-5-46	General LeMay Plans Pittsburgh Address On Atomic Bomb And Future Air Development.
61	12-6-46	Aberdeen Studies Regarding Effect Of Shock Waves On Underground Installations.
62	14-6-46	Peacetime Application Of Atomic Research Possible Under Army Program.
63	14-6-46	Operations Crossroads To Test Ordnance Material.
64	26-6-46	Manhattan Project Reports On Atom Bombing Of Hiroshima And Nagasaki To Be Released 29 June.
64(a)	-	Report:- The Atomic Bombings Of Hiroshima And Nagasaki.
64(b)	-	Photographs Of The Atomic Bombings Of Hiroshima And Nagasaki.
65	28-6-46	Radioactive Uranium Isotopes Open Up Unexplored Processes Of Life.
66	30-6-46	Resume Of Manhattan Project Reports On Atom Bombing Of Hiroshima And Nagasaki.
67	22-7-46	Remarks By Secretary Of War On Radio Program "You And The Atom".
68	22-7-46	AAF Seeking Atomic Propulsion For Aircraft.
69	2-8-46	Announcement Of First Shipment Of Radioisotopes From Clinton Laboratories.

NO.	DATE	TITLE
70	-	Production Of Radioactive Isotopes In The Pile.
71	2-8-46	Background Material For Town Of Oak Ridge.
72	2-8-46	Background Material For Clinton Laboratories.
73	2-8-46	Camp Upton To Be Site Of New Atomic Research Center.
74	15-8-46	Atomic Energy Lectures To Open In War Department.
75	19-8-46	AAF Begins New Study Of Upper Air Regions.
76	27-8-46	Remarks By Secretary Of War At Opening Of Atomic Energy Lecture Series.
77	1-9-46	Unfamiliar "Mesons" Studies By AAF Technicians.
78	3-9-46	New National War College Opens.
79	9-9-46	Address By Under Secretary Of War At Wrightsville.
80	24-9-46	Atomic Lectures Begin At Ft. Belvoir.
81	3-10-46	Address By General Ridgway At San Francisco, Cal.
82	7-10-46	Secretary Of War Denies Stories That Atomic Bombs Were Shipped To Great Britain.
83	9-10-46	Remarks By General Groves Before National Safety Congress At Chicago.
84	25-10-46	General Groves Urges 2 December As Birthday Of Atomic Energy.
85	28-10-46	Statement By General Groves In Regard To The Appointment Of The Atomic Energy Commission.
86	28-10-46	Statement By Secretary Of War Regarding Transfer Of Responsibility From U. S. Army To Atomic Energy Commission.
87	30-10-46	Calendar Of Important Events In Development Of Atomic Energy.
88	7-11-46	Progress Made In Declassification Of Atomic Energy Information.
89	10-11-46	Atomic Laboratory To Be Built At Schenectady, N. Y.
90	12-11-46	Atomic Energy Commission Visiting Principal Atomic Energy Facilities.
91	22-11-46	Development Of Atomic Power No Simple Problem.
92	26-11-46	Chicago Pile Fourth Anniversary Meeting To Be Held At Chicago.

NO.	DATE	TITLE
93	29-11-46	Ceremonies To Mark Atomic Anniversary.
94	29-11-46	Announcement Of Award Of Construction Contract For Dayton Project.
95	1-12-46	Background Material For Observance Of Anniversary Of Development Of Atomic Energy.
96	10-12-46	Announcement Of Award Of Contract For Brookhaven National Laboratory.
97	11-12-46	Atomic Energy Commission To Absorb Manhattan Engineer District 1 January.
98	31-12-46	Statement Of Secretary Of War On Transfer Of Manhattan District.
99	31-12-46	Background Information On Development Of Atomic Energy Under Manhattan Project.
100	31-12-46	Joint Announcement By Atomic Energy Commission And Secretary Of War On Transfer Of Manhattan District.
101	31-12-46	Statement of Members Of Atomic Energy Commission On Transfer Of Manhattan District.

THE WHITE HOUSE

Washington, D. C.

IMMEDIATE RELEASE August 6, 1945

STATEMENT BY THE PRESIDENT OF THE UNITED STATES

Sixteen hours ago an American airplane dropped one bomb on Hiroshima, an important Japanese Army base. That bomb had more power than 20,000 tons of T.N.T. It had more than two thousand times the blast power of the British "Grand Slam" which is the largest bomb ever yet used in the history of warfare.

The Japanese began the war from the air at Pearl Harbor. They have been repaid many fold. And the end is not yet. With this bomb we have now added a new and revolutionary increase in destruction to supplement the growing power of our armed forces. In their present form these bombs are now in production and even more powerful forms are in development.

It is an atomic bomb. It is a harnessing of the basic power of the universe. The force from which the sun draws it power has been loosed against those who brought war to the Far East.

Before 1939, it was the accepted belief of scientists that it was theoretically possible to release atomic energy. But no one knew any practical method of doing it. By 1942, however, we knew that the Germans were working feverishly to find a way to add atomic energy to the other engines of war with which they hoped to enslave the world. But they failed. We may be grateful to Providence that the Germans got the V-1's and the V-2's late and in limited quantities and even more grateful that they did not get the atomic bomb at all.

The battle of the laboratories held fateful risks for us as well as the battles of the air, land and sea, and we have now won the battle of the laboratories as we have won the other battles.

Beginning in 1940, before Pearl Harbor, scientific knowledge useful in war was pooled between the United States and Great Britain, and many priceless helps to our victories have come from that arrangement. Under that general policy the research on the atomic bomb was begun. With American and British scientists working together we entered the race of discovery against the Germans.

The United States had available the large number of scientists of distinction in the many needed areas of knowledge. It had the tremendous industrial and financial resources necessary for the project and they could be devoted to it without undue impairment of other vital war work. In the United States the laboratory work and the production plants, on which a substantial start had already been made, would be out of reach of enemy bombing, while at that time Britain was exposed to constant air attack and was still threatened with the possibility of invasion. For these reasons Prime Minister Churchill and President Roosevelt agreed that it was wise to carry on the project here. We now have two great plants and many lesser works devoted to the production of atomic power. Employment during peak construction numbered 125,000 and over 65,000 individuals are even now engaged in operating the plants. Many have worked there for two and a half years. Few know what they have been producing. They see great quantities of material going in and they see nothing coming out of these plants, for the physical size of the explosive charge is exceedingly small. We have spent two billion dollars on the greatest scientific gamble in history -- and won.

But the greatest marvel is not the size of the enterprise, its secrecy, nor its cost, but the achievement of scientific brains in putting together infinitely complex pieces of knowledge held by many men in different fields of science into a workable plan. And hardly less marvelous has been the capacity of industry to design, and of labor to operate, the machines and methods to do things never done before so that the brain child of many minds came forth in physical shape and performed as it was supposed to do. Both science and industry worked under the direction of the United States Army, which achieved a unique success in managing so diverse a problem in the advancement of knowledge in an amazingly short time. It is doubtful if such another combination could be got together in the world. What has been done is the greatest achievement of organized science in history. It was done under high pressure and without failure.

We are now prepared to obliterate more rapidly and completely every productive enterprise the Japanese have above ground in any city. We shall destroy their docks, their factories, and their communications. Let there be no mistake; we shall completely destroy Japan's power to make war.

It was to spare the Japanese people from utter destruction that the ultimatum of July 26 was issued at Potsdam. Their leaders promptly rejected that ultimatum. If they do not now accept our terms they may expect a rain of ruin from the air, the like of which has never been seen on this earth. Behind this air attack will follow sea and land forces in such numbers and power as they have not yet seen and with the fighting skill of which they are already well aware.

The Secretary of War, who has kept in personal touch with all phases of the project, will immediately make public a statement giving further details.

His statement will give facts concerning the sites at Oak Ridge near Knoxville, Tennessee, and at Richland near Pasco, Washington, and an installation near Santa Fe, New Mexico. Although the workers at the sites have been making materials to be used in producing the greatest destructive force in history they have not themselves been in danger beyond that of many other occupations, for the utmost care has been taken of their safety.

The fact that we can release atomic energy ushers in a new era in man's understanding of nature's forces. Atomic energy may in the future supplement the power that now comes from coal, oil, and falling water, but at present it cannot be produced on a basis to compete with them commercially. Before that comes there must be a long period of intensive research.

It has never been the habit of the scientists of this country or the policy of this Government to withhold from the world scientific knowledge. Normally, therefore, everything about the work with atomic energy would be made public.

But under present circumstances it is not intended to divulge the technical processes of production or all the military applications, pending further examination of possible methods of protecting us and the rest of the world from the danger of sudden destruction.

I shall recommend that the Congress of the United States consider promptly the establishment of an appropriate commission to control the production and use of atomic power within the United States. I shall give further consideration and make further recommendations to the Congress as to how atomic power can become a powerful and forceful influence towards the maintenance of world peace.

- - -

WAR DEPARTMENT

Washington, D. C.

IMMEDIATE RELEASE

August 6, 1945

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 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.

I.

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 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. Purnell. 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. Vannevar Bush, and Dr. James B. Conant, for the United States; Field Marshal Sir John Dill and Colonel J. J. Llewellin, 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 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.

---

* Colonel Llewellin 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.

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, 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. Vannevar 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.

- - - -

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

August 6, 1945

MEMORANDUM FOR THE PRESS:

In response to questions as to the damage accomplished by the atomic bomb dropped on Hiroshima, the War Department announced that it was as yet unable to make an accurate report. Reconnaissance planes state that an impenetrable cloud of dust and smoke covered the target area. As soon as accurate details of the results of the bombing become available, they will be released by the Secretary of War.

END

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

First Test Conducted
In New Mexico
(This Release Issued
Locally in New Mexico)

Mankind's successful transition to a new age, the Atomic Age was ushered in July 16, 1945, before the eyes of a tense group of renowned scientists and military men gathered in the desertlands of New Mexico to witness the first end results of their $2,000,000,000 effort. Here in a remote section of the Alamogordo Air Base 120 miles southeast of Albuquerque the first man-made atomic explosion, the outstanding achievement of nuclear science, was achieved at 5:30 A.M. of that day. Darkening heavens pouring forth rain and lightning immediately up to the zero hour heightened the drama.

Mounted on a steel tower, a revolutionary weapon destined to change war as we know it, or which may even be the instrumentality to end all major wars was set off with an impact which signalized man's entrance into a new physical world. Success was greater than the most ambitious estimates. A small amount of matter, the product of a chain of huge specially constructed industrial plants, was made to release the energy of the universe locked up within the atom from the beginning of time. A fabulous achievement had been reached. Speculative theory, barely established in pre-war laboratories, had been projected into practicality.

This phase of the Atomic Bomb Project, which is headed by Major General Leslie R. Groves, was under the direction of Dr. J. R. Oppenheimer, theoretical physicist of the University of California. He is to be credited with achieving the implementation of atomic energy for military purposes.

Tension before the actual detonation was at a tremendous pitch. Failure was an ever-present possibility. Too great a success, envisioned by some of those present, might have meant an uncontrollable unusable weapon.

Final assembly of the atomic bomb began on the night of July 12 in an old ranch house. As various component assemblies arrived from distant points, tension among the scientists mounted apace. Coolest of all was the man charged with the actual assembly of the vital core, Dr. R. F. Bacher in normal times a Professor at Cornell University.

The entire cost of the project, representing the erection of whole cities and radically new plants spread over many miles of countryside, plus unprecedented experimentation, was represented in the pilot bomb and its parts. Here was the focal point of the venture. No other country in the world had been capable of such an outlay in brains and technical effort.

The full significance of these closing moments before the final factual test was <u>not</u> lost on these men of science. They fully knew their position as pioneers into another Age. They also knew that one false move would blast them and their entire effort into eternity. Before the assembly started a receipt for the vital matter was signed by Brigadier General Thomas F. Farrell, General Groves deputy. This signalized the formal transfer of the irreplaceable material from the scientists back to the Army, which had originally produced it at one of its great separation plants.

I ing final preliminary assembly, a bad few minutes developed when the assembly of an important section of the bomb was delayed. The entire unit was machine-tooled to the finest measurement. The insertion was partially completed when it apparently wedged tightly and would go no farther. Dr. Bacher, however, was undismayed and reassured the group that time would solve the problem. In three minutes time, Dr. Bacher's statement was verified and basic assembly was completed without further incident.

Specialty teams, comprised of the top men on specific phases of science, all of which were bound up in the whole, took over their specialized parts of the assembly.

On Saturday, July 14, the unit which was to determine the success or failure of the entire project was elevated to the top of the steel tower. All that day and the next, the job of preparation went on. In addition to the apparatus necessary to cause the detonation, complete instrumentation to determine all the reactions of the bomb was rigged on the tower.

The ominous weather which had dogged the assembly of the bomb had a very sobering affect on the assembled experts whose work was accomplished amid lightning flashes and peals of thunder. The weather, unusual and upsetting, blocked aerial observation of the test. It even held up the actual explosion scheduled at 4 A.M. for an hour and a half. For many months the approximate date and time had been set and had been one of the high level secrets of the best **kept secret of the entire war.**

Nearest observation point was set up 10,000 yards south of the tower where in a timber and earth shelter the controls for the test were located. At a point 17,000 yards from the tower at a point which would give the best observation the key figures in the atomic bomb project took their posts. These included General Groves, Dr. Vannevar Bush, head of the Office of Scientific Research and Development and Dr. James B. Conant, president of Harvard University.

Actual detonation was in charge of Dr. K. T. Bainbridge of Massachusetts Institute of Technology. He and Lieutenant Bush, in charge of the Military Police Detachment, were the last men to inspect the tower with its cosmic bomb.

At three o'clock in the morning the party moved forward to the control station. General Groves and Dr. Oppenheimer consulted with the weathermen. The decision was made to go ahead with the test despite the lack of assurance of favorable weather. The time was set for 5:30 A.M.

General Groves rejoined Dr. Conant and Dr. Bush and just before the test time, they joined the many scientists gathered at the Base Camp. Here all present were ordered to lie on the ground, face downward, heads away from the blast direction.

Tension reached a tremendous pitch in the control room as the deadline approached. The several observation points in the area were tied in to the control room by radio and with 20 minutes to go, Dr. S. K. Allison of Chicago University took over the radio net and made periodic time announcements.

The time Signals, "minus 20 minutes, minus fifteen minutes", and on and on increased the tension to the breaking point as the group in the control room, which included Dr. Oppenheimer and General Farrell, held their breaths, all praying with the intensity of the moment which will live forever with each man who was there. At "minus 45 seconds", robot mechanism took over and from that point on the whole great complicated mass of intricate mechanism was in operation without human control. Stationed at a reserve switch, however, was a soldier scientist ready to attempt to stop the explosion should the order be issued. The order never came.

At the appointed time, there was a blinding flash lighting up the whole area brighter than the brightest daylight. A mountain range three miles from the observation point stood out in bold relief. Then came a tremendous sustained roar and a heavy pressure wave which knocked down two men outside the control center. Immediately thereafter, a huge multi-colored surging cloud boiled to an altitude of over 40,000 feet. Clouds in its path disappeared. Soon the shifting substratosphere winds dispersed the now grey mass.

The test was over, the project a success.

The steel tower had been entirely vaporized. Where the tower had stood, there was a huge sloping crater. Dazed but relieved at the success of their tests, the scientists promptly marshalled their forces to estimate the strength of America's new weapon. To examine the nature of the crater, specially equipped tanks were wheeled into the area, one of which carried Dr. Enrico Fermi, noted nuclear scientist. Answer to their findings rest in the destruction effected in Japan today in the first military use of the atomic bomb.

Had it not been for the desolated area where the test was held and for the cooperation of the press in the area, it is certain that the test itself would have attracted far-reaching attention. As it was, many people in that area are still discussing the effect of the smash. A significant aspect, recorded by the press, was the experience of a blind girl near Albuquerque many miles from the scene, who, when the flash of the test lighted the sky before the explosion could be heard, exclaimed, "What was that?"

Interviews of General Groves and General Farrell give the following on-the-scene versions of the test. General Groves said: "My impressions of the night's high points follow: After about an hour's sleep I got up at 0100 and from that time on until about 0500 I was with Dr. Oppenheimer constantly. Naturally he was tense, although his mind was working at its usual extraordinary efficiency. I attempted to shield him from the evident concern of many of his assistants who were disturbed by the uncertain weather conditions. By 0400 we decided that we could probably fire at 0530. By 0400 the rain had stopped but the sky was heavily overcast. Our decision became firmer as time went on.

"During most of these hours the two of us journeyed from the control house out into the darkness to look at the stars and to assure each other that the one or two visible stars were becoming brighter. At 0510 I left Dr. Oppenheimer and returned to the main observation point which was 17,000 yards from the point of explosion. In accordance with our orders I found all personnel not otherwise occupied massed on a bit of high ground.

"Two minutes before the scheduled firing time all persons lay face down with their feet pointing towards the explosion. As the remaining time was called over the loud speaker from the 10,000-yard control station there was complete awesome silence. Dr. Conant said he had never imagined seconds could be so long. Most of the individuals in accordance with orders shielded their eyes in one way or another.

"First came the burst of light of a brilliance beyond any comparison. We all rolled over and looked through dark glasses at the ball of fire. About forty seconds later came the shock wave followed by the sound, neither of which seemed startling after our complete astonishment at the extraordinary lighting intensity.

"A massive cloud was formed which surged and billowed upward with tremendous power, reaching the substratosphere in about five minutes.

"Two supplementary explosions of minor effect other than the lighting occurred in the cloud shortly after the main explosion.

"The cloud traveled to a great height first in the form of a ball, then mushroomed, then changed into a long trailing chimney-shaped column and finally was sent in several directions by the variable winds at the different elevations.

"Dr. Conant reached over and we shook hands in mutual congratulations. Dr. Bush, who was on the other side of me, did likewise. The feeling of the entire assembly, even the uninitiated, was one of profound awe. Drs. Conant and Bush and myself were struck by an even stronger feeling that the faith of those who had been responsible for the initiation and the carrying on of this Herculean project had been justified."

General Farrell's impressions are: "The scene inside the shelter was dramatic beyond words. In and around the shelter were some twenty odd people concerned with last minute arrangements. Included were Dr. Oppenheimer, the Director, who had borne the great scientific burden of developing the weapon from the raw materials processed in Tennessee and the State of Washington, and a dozen of his key assistants, Dr. Kistiakowsky, Dr. Bainbridge, who supervised all the detailed arrangements for the test; the weather expert, and several others. Besides these, there were a handful of soldiers, two or three Army officers and one Naval officer. The shelter was filled with a great variety of instruments and radios.

"For some hectic two hours preceding the blast, General Groves stayed with the Director. Twenty minutes before zero hour, General Groves left for his station at the base camp, because it provided a better observation point.

"Just after General Groves left, announcements began to be broadcast of the interval remaining before the blast to the other groups participating in and observing the test. As the time interval grew smaller and changed from minutes to seconds, the tension increased by leaps and bounds. Everyone in that room knew the awful potentialities of the thing that they thought was about to happen. The scientists felt that their figuring must be right and that the bomb had to go off but there was in everyone's mind a strong measure of doubt.

"We were reaching into the unknown and we did not know what might come of it. If the shot were successful, it was a justification of the several years of intensive effort of tens of thousands of people--statesmen, scientists, engineers, manufacturers, soldiers, and many others in every walk of life.

"In that brief instant in the remote New Mexico desert, the tremendous effort of the brains and brawn of all these people came suddenly and startlingly to the fullest fruition. Dr. Oppenheimer, on whom had rested a very heavy burden, grew tenser as the last seconds ticked off. He scarcely breathed. He held on to a post to steady himself. For the last few seconds, he stared directly ahead and then when the announcer shouted "Now!" and there came this tremendous burst of light followed shortly thereafter by the deep growling roar of the explosion, his face relaxed into an expression of tremendous relief. Several of the observers standing back of the shelter to watch the lighting effects were knocked flat by the blast.

"The tension in the room let up and all started congratulating each other. Everyone sensed "This is it!" No matter what might happen now all knew that the impossible scientific job had been done. Atomic fission would no longer be hidden in the cloisters of the theoretical physicists' dreams. It was almost full grown at birth. It was a great new force to be used for good or for evil. There was a feeling in that shelter that those concerned with its nativity should dedicate their lives to the mission that it would always be used for good and never for evil.

L. .. Kistiakowsky threw his arms around Dr. Oppenheim..r and embraced him with shouts of glee. Others were equally enthusiastic. All the pent-up emotions were released in those few minutes and all seemed to sense immediately that the explosion had far exceeded the most optimistic expectations and wildest hopes of the scientists. All seemed to feel that they had been present at the birth of a new age--The Age of Atomic Energy--and felt their profound responsibility to help in guiding into right channels the tremendous forces which had been unlocked for the first time in history.

"As to the present war, there was a feeling that no matter what else might happen, we now had the means to insure its speedy conclusion and save thousands of American lives. As to the future, there had been brought into being something big and something new that would prove to be immeasurably more important than the discovery of electricity or any of the other great discoveries which have so affected our existence.

"The effects could well be called unprecedented, magnificent, beautiful, stupendous and terrifying. No man-made phenomenon of such tremendous power had ever occurred before. The lighting effects beggard description. The whole country was lighted by a searing light with the intensity many times that of the midday sun. It was golden, purple, violet, gray and blue. It lighted every peak, crevasse and ridge of the nearby mountain range with a clarity and beauty that cannot be described but must be seen to be imagined. It was that beauty the great poets dream about but describe most poorly and inadequately. Thirty seconds after the explosion came first, the air blast pressing hard against the people and things, to be followed almost immediately by the strong, sustained, awesome roar. Words are inadequate tools for the job of acquainting those not present with the physical, mental and psychological effects. It had to be witnessed to be realized."

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, N.

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

Labor Plays Vital Role In Activity Of Manhattan District

Once the magnitude of the atomic bomb project had been established, manpower immediately was recognized as one of the key ingredients which would spell the difference between success or failure. The Army was faced with its two largest construction jobs, the largest in modern times and possibly the largest in history. In addition to the usual obstacles, a stepped-up schedule had to be met, time being of the essence in a grim race against the unknown schedule of the Germans.

The project, which is operated by the Army under the "cover" name of the Manhattan Engineer District of the Corps of Engineers, had an unusual obstacle to face. Security was paramount. At this time, national competition for manpower was acute. Industries and war projects were vieing with each other in this competition, citing the key part their people were playing in the war effort. No such inducement could be made to attract labor to the Atomic Bomb Project. Nothing whatsoever could be told in recruitment beyond the fact that the work would be in the top interests of the war endeavor.

At first, the general attitude was that the project's construction was just another job -- or that "business as usual" was the order of the day. Trade unions, the War Manpower Commission, plus the Manhattan District's expediters teamed to achieve what at times seemed impossible, provision of adequate manpower. Heading this program was Colonel Clarence D. Barker, chief of the Labor Division of the Office of the Chief of Engineers. (see attachment for brief biography.)

By the time the Manhattan District began its large scale recruiting activities, the War Manpower Commission and its agencies were well established and labor recruiting was carried on primarily through their services. The U. S. Employment Service utilized the American Federation of Labor to recruit and move skilled tradesmen. The common laborers' union, however, did not have sufficient membership to supply demands and these were recruited through the U. S. E. S. from the general labor market.

Types of personnel necessary to man the project covered practically all occupational skills. These ranged from common laborers, carpenters and plumbers to glass blowers, chemists and physicists. The mass of personnel, however, fell into two general classes: construction laborers and mechanics and plant operators.

Recruitment of special skills such as chemists, physicists, laboratory technicians and others presented many problems. As a whole, they were as difficult to find as the larger numbers of the more common skills. The most difficult problems in this phase were handled personally by Dr. Samuel Arnold, Dean of Men at Brown University, himself an eminent scientist.

Much of the supervisory and technical personnel were recruited by the many contractors of the Manhattan District within their own organizations. Many of the top scientists were brought to the project through contracts placed with various universities.

The recruiting of operations people was particularly a difficult problem because of the necessity of training all new people for the work. It necessitated the stripping of the operating contr(ors of a great many of the key men of their organ. ations which in view of the increased activities brought on by the war programs other than that connected with the Manhattan District had made the situation more complex.

This was the overall personnel procurement program of the Manhattan Engineer District. But there were many problems which at times seemed to defy solution. Had it not been for the complete coordination of the whole problem, several situations could have progressed to disastrous proportions.

The construction, by reasons of its immensity and uniqueness and also because of a great many new practices developed which had never been used in the industry before necessitated the support of the top labor leaders. On several occasions it was necessary that Judge Robert Patterson, the Under Secretary of War call in the leaders, including the President of A. F. of L., Mr. William Green and the General Presidents of several Building Trades Unions to seek their cooperation and to give them a better understanding of the problems involved. Mr. Philip Murray, CIO Chief, aided greatly.

They, in a great many instances, broke down conditions of long standing in order that the completion on schedule be not interfered with. Judge Patterson also gave a great deal of his personal time to this phase when it was required.

By June 15, 1944, the shortage of electricians at the Hanford Engineer Works, Washington, and the Clinton Engineer Works, Tennessee, had become so acute that work schedules were seriously endangered. Twenty-five hundred electricians had to be recruited. A plan was worked out by the Under Secretary of War and Edward J. Brown, president of the International Brotherhood of Electrical Workers. Electricians would be borrowed from other employers for a period of 90 days. The National Electrical Contractors Association was called in and a carefully worded news release for security reasons was issued by the War Department stating the project's predicament. In two months' time, the bottleneck was completely and satisfactorily broken. The plan was continued throughout construction.

An acute shortage of machinists and toolmakers late in 1943 resulted in stringent measures. The New Mexico installation urgently needed 190 men in these skills. The War Manpower Commission issued instructions to its regional directors on October 21, 1943, authorizing them to certify certain workers as available to the Manhattan District even over the protests of their employers, many of whom were in other essential war programs. With this authority as a basis, special recruiting teams composed of an Army officer, a recruiter, and a security agent procured the workers needed in one month.

The Manhattan District experienced more unusual problems of turnover and absenteeism than other war industries and installations. This was directly due to the isolation of the projects, the extended length of the construction period, expansions in the construction program, security, and limited housing and crowded transportation facilities.

A rigorous campaign was set up to solve these problems. Exit interviews salvaged many. In hundreds of cases, competent employees were either persuaded to go back to work or to take other jobs on the same project. Employees made available by reduction in force were also picked up in this manner and directed to other jobs on the project or in some cases returned to essential industry. These interviews also determined why workers were leaving and set up a basis for corrective action.

which in view of the increased activities brought on by the war programs other than that connected with the Manhattan District had made the situation more complex.

This was the overall personnel procurement program of the Manhattan Engineer District. But there were many problems which at times seemed to defy solution. Had it not been for the complete coordination of the whole problem, several situations could have progressed to disastrous proportions.

The construction, by reasons of its immensity and uniqueness and also because of a great many new practices developed which had never been used in the industry before necessitated the support of the top labor leaders. On several occasions it was necessary that Judge Robert Patterson, the Under Secretary of War call in the leaders, including the President of A. F. of L., Mr. William Green and the General Presidents of several Building Trades Unions to seek their cooperation and to give them a better understanding of the problems involved. Mr. Philip Murray, CIO Chief, aided greatly.

They, in a great many instances, broke down conditions of long standing in order that the completion on schedule be not interfered with. Judge Patterson also gave a great deal of his personal time to this phase when it was required.

By June 15, 1944, the shortage of electricians at the Hanford Engineer Works, Washington, and the Clinton Engineer Works, Tennessee, had become so acute that work schedules were seriously endangered. Twenty-five hundred electricians had to be recruited. A plan was worked out by the Under Secretary of War and Edward J. Brown, president of the International Brotherhood of Electrical Workers. Electricians would be borrowed from other employers for a period of 90 days. The National Electrical Contractors Association was called in and a carefully worded news release for security reasons was issued by the War Department stating the project's predicament. In two months' time, the bottleneck was completely and satisfactorily broken. The plan was continued throughout construction.

An acute shortage of machinists and toolmakers late in 1943 resulted in stringent measures. The New Mexico installation urgently needed 190 men in these skills. The War Manpower Commission issued instructions to its regional directors on October 21, 1943, authorizing them to certify certain workers as available to the Manhattan District even over the protests of their employers, many of whom were in other essential war programs. With this authority as a basis, special recruiting teams composed of an Army officer, a recruiter, and a security agent procured the workers needed in one month.

The Manhattan District experienced more unusual problems of turnover and absenteeism than other war industries and installations. This was directly due to the isolation of the projects, the extended length of the construction period, expansions in the construction program, security, and limited housing and crowded transportation facilities.

A rigorous campaign was set up to solve these problems. Exit interviews salvaged many. In hundreds of cases, competent employees were either persuaded to go back to work or to take other jobs on the same project. Employees made available by reduction in force were also picked up in this manner and directed to other jobs on the project or in some cases returned to essential industry. These interviews also determined why workers were leaving and set up a basis for corrective action.

A companion problem to turnover was absenteeism. Repeated absenteeism was the greatest single cause for terminations. War economy with its larger incomes resulting from higher wages and longer hours provided less compulsion for steady work than the lower incomes of peace time. Therefore, every effort was made, within the limits of the isolated areas where the projects were established, to better living and working conditions.

It was soon found that job dissatisfaction as a whole hinged on lack of facilities present in normal American communities. To the seasoned construction worker, conditions were average. To the men having their first fling at construction and to the men and women who took production jobs, life was markedly different. The Army attempted to make conditions more normal by providing recreation facilities as movie houses, baseball diamonds, tennis courts and recreation halls. These facilities greatly assisted in keeping workers on the job.

The Army also provided subsidized transportation, nursery schools to release working mothers, tire and gasoline rationing boards and conveniently located shopping facilities.

The following unions were those most closely associated with the construction phases of the project:

Int'l Ass'n of Heat and Frost Insulators and Asbestos Workers
Int'l Brotherhood of Boiler Makers, Iron Ship Builders and Helpers
Bricklayers, Masons and Plasterers' Int'l Union
United Brotherhood of Carpenters and Joiners
Int'l Brotherhood of Electrical Workers
Int'l Union of Elevator Constructors
Int'l Union of Operating Engineers
Int'l Ass'n of Bridge, Structural and Ornamental Iron Workers
Int'l Hod Carriers, Bldg., and Common Laborers Union
Wood, Wire and Metal Lathers' Int'l Union
Brotherhood of Painters, Decorators and Paperhangers
Operative Plasterers and Cement Finishers Int'l Ass'n
United Slate, Tile and Composition Roofers, Damp & Waterproof Workers Ass'n
United Ass'n of Journeymen Plumbers and Steam Fitters
Sheet Metal Workers' International Ass'n
Int'l Brotherhood of Teamsters, Chauffers, Warehousemen and Helpers
Building Trades Dept. of AFL
Int'l Brotherhood of Firemen and Oilers

Co. ael Clarence D. Barker,

Chief, Labor Division, Office of the Chief of Engineers.

****

Born - Paterson, New Jersey - Nov. 4, 1902.

Educated in Providence schools
Attended Brown University and
Rhode Island School of Design

From 1923 to 1926, worked in South America on Railroad irrigation projects, as well as in Central America, including work on the Pan-American Highway at El Salvador.

From 1926 to 1934, worked on highway engineering and construction throughout Rhode Island.

In 1934, attended the Coast Artillery School at Fortress Monroe, Virginia; he was originally commissioned as a 2nd Lt. CA-Res., in 1925. He was assigned to Civilian Conservation Corps construction until 1939 when he returned to civil construction in Rhode Island.

In September 1940, recalled to active duty as a captain with the Construction Division of the Quartermaster General's Office, and in June 1941 was transferred to the Corps of Engineers.

Charged with the labor relations of the entire Pacific Coast during the formative and most vital stage of the construction period representing the Corps of Engineers. In April 1942, was assigned as Chief, Labor Relations Branch, Construction Division in the Office of the Chief of Engineers, Washington, D. C.

IMMEDIATE RELEASE

Atomic Energy Source
Of Inexhaustible Power

Atomic energy, harnessed for the first time by our scientists for use in atomic bombs against the Japanese armed forces, is the practically inexhaustible source of power that, it is believed, enables our sun to supply us with heat, light, and other forms of radiant energy without which life on earth would not be possible.

It is also the same energy stored in the atoms of the material universe, that, according to current theory, keeps the stars, bodies much larger than our sun, radiating their enormous quantities of light and heat for billions of years, instead of burning themselves out in periods measured only in thousands of years.

The existence of atomic energy was recognized by Einstein about forty years ago on purely theoretical grounds, as an outgrowth of his famous relativity theory, according to which velocity brings about an increase in mass, this increase bearing a direct relationship to the velocity of light.

From the formula for this relationship Einstein derived his famous mathematical equation that revealed the equivalence between mass and energy. It showed that any given quantity of mass was the equivalent of a specific amount of energy, and vice versa.

In this equation he showed the existence of a definite relationship between matter, energy and the velocity of light.

In this formula the letter "M" stands for mass in grams; the letter "E" represents energy in ergs, while the letter "C" stands for the velocity of light in centimeters per second. The energy content of any given quantity of substance, the formula states, is equal to the mass of the substance (in terms of grams), multiplied by the square of the velocity of light (in terms of centimeters per second). The velocity of light is 300,000 Kilometers, or 30,000,000,000 (thirty billion) centimeters, per second.

Take one gram of any substance. According to the Einstein formula the amount of energy ("E") in ergs in this mass is equal to 1 (the mass of the substance in grams) multiplied by 30,000,000,000 squared. In other words, the energy content of one gram of matter equals 900 billion billion ergs.

The energy we are now able to utilize in the atomic bombs, at 100 percent efficiency, constitutes only one-tenth of one percent of the total energy present in the material. But even one-hundredth of one percent is still the most destructive force by far on this earth.

Atomic energy, released through the splitting of atoms, differs radically from ordinary types of energy hitherto available to man in that it involves annihilation of matter. When an atom is split part of its matter is converted into energy.

This is materially different from obtaining power by the use of a water wheel, for example, or by the burning of coal or oil. In the case of the water wheel the water molecules taking part remain entirely unchanged. They simply lose potential energy as they pass from the dam to the tailrace.

In the case of burning coal or oil a more intense process takes place, as the atoms of carbon, hydrogen, and oxygen (of which the coal and oil molecules are composed) are regrouped by combustion into new molecules forming new substances. The atoms themselves, however, still remain unchanged--they are still carbon, hydrogen and oxygen. None of them, as far as can be measured, lose any part of their mass.

In the case of atomic energy, however, the atom itself completely changes its identity, and in this process of change it loses part of its mass, which is converted into energy. The amount of energy obtained is directly proportional to the amount of atomic mass destroyed. The sun, for example, is believed to obtain its energy through the partial destruction of its hydrogen, through a complex process in which the hydrogen is converted into helium.

In this process four hydrogen atoms, each with an atomic mass of 1.008 (total, 4.032 atomic mass units), combine to form one helium atom, which has an atomic mass of 4.003. This represents a loss in mass on the part of the four hydrogen atoms of 0.029 atomic mass units, which is converted into pure energy. The amount of energy liberated in this process by the enormous quantities of hydrogen in the sun represents an actual loss of the sun's mass at the rate of 4,000,000 tons per second, a mere speck of dust in relation to the sun's total mass of two billion billion billion tons.

By the use of its atomic energy the sun has been able to give off its enormous amounts of radiation for a period estimated at ten billion years, and its mass at the present rate of burning is enough to last 15,000 billion years more, though, of course, the amount of its radiation would be greatly reduced long before that in proportion to the decrease of its mass. Radiations in amounts sufficient to support life on earth are estimated to continue for some ten to a hundred billion years longer.

The development of the atomic bomb constitutes the most dramatic proof so far offered for the correctness of the theory of relativity and also marks the first time it has been put to practical use outside the laboratory.

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

Atomic Power Usage Once Thought Impossible

Ten years ago doubt was expressed that it would ever be possible to utilize atomic power on a practical scale. This was based on the methods of atom-smashing then in use, in which billions and billions of atomic bullets had to be fired to release the energy in only a few atoms. That was the only known method until the beginning of 1939. Under these circumstances the chances of utilizing atomic energy on a practical scale were as far from realization as a flight to Mars.

Early in January, 1939, came the discovery of what is known as "uranium fission," one of the greatest discoveries in the history of science, that changed the picture overnight. It was found that a rare twin, or isotope, of the element uranium, having an atomic weight of 235, could be split in two nearly equal halves, releasing a tremendous amount of atomic energy in the process.

The amount of energy released per atom was so great that it was at once realized that this substance, if it could be separated from its twin element, uranium 238 (u-238), held tremendous possibilities as the most powerful war weapon ever made, and also, if expense was disregarded, as the most tremendous source for power known on earth.

The trouble was that U-235 constituted only seven-tenths of one percent of the uranium metal found in nature and it came so inextricably mixed up with the 99.3 percent of U-238 that it could not be separated on a practical scale by any method than known.

The story of this discovery is one of the most dramatic in the history of science. It began in Germany in 1938. It is now making history over Japan.

The principal character in the story is Dr. Lise Meitner, a woman physicist working at the Kaiser-Wilheim Institute in Berlin. With her associates, Dr. Otto Hahn and Dr. F. Strassmann, chemists, she was carrying on experiments in which she fired neutrons (atomic particles without electric charge) into the hearts of uranium atoms. The uranium thus bombarded was submitted to chemical analysis.

To their great amazement they found the element barium in the debris of the smashed uranium atoms. True, they had put some barium in there as a chemical "carrier," to precipitate a powerful new radioactive substance present in the debris, a substance much more powerful than radium. But when they tried to separate the barium from the mysterious radioactive substance it could not be done by the best chemical means known. There could be only one inescapable conclusion--the mysterious substance was itself barium, a radioactive barium that had been there before they had put in the barium that was to serve as a "carrier."

Where did this super-radioactive barium come from? It was a scientific mystery of the first order, much like discovering a chicken hatch out from a duck's egg. Nothing like it had ever been observed before anywhere.

Before the mystery could be solved Lise Meitner was exiled from Germany as a "non-Aryan." She went first to Copenhagen, her most important life's work interrupted at its most exciting stage. Meantime, on January 6, 1939, Drs. Hahn and Strassmann reported the strange phenomenon in a German scientific publication, in which they stated that, while they could not doubt the presence of the radioactive barium, they could not bring themselves to believe that it came from the uranium. It was much too revolutionary a concept for them to accept.

Lise Meitner, more imaginative, faced the facts and took the consequences. Since the radioactive barium was not there to begin with, then its appearance could lead to only one inescapable conclusion,--it came from the uranium as the result of the splitting of the uranium atom into two nearly equal halves. Uranium, the heaviest of the elements, has an atomic number of 92 and an atomic weight of 238. Barium has an atomic number of 56 and the atomic weight of 137. The uranium then must have been split into two lighter elements, one of which was the mysterious barium.

If that were so, Dr. Meitner knew, the splitting must be accompanied by the release of tremendous amounts of atomic energy, greater by far than had ever been achieved on earth. It would mean at last the key to atomic energy.

She lost no time in communicating her results to her friend, Dr. Frisch, of Copenhagen, former associate of Dr. Niels Bohr, one of the world's greatest scientists. Dr. Frisch, himself a physicist, and Dr. Meitner, repeated the experiments. Sure enough, once again there was the radioactive barium, and, wonder of wonders, here in their apparatus, set specifically to watch for it, they saw for the first time the gushing of a veritable fountain of atomic energy.

Dr. Frisch cabled the news at once to Dr. Bohr, who was at that time in America. On Tuesday, January 24, 1939, the famous experiment was repeated at Columbia University by Dr. Bohr and Professor Enrico Fermi, both Nobel Laureates in physics, and Professor John R. Dunning. Later that week, Friday, January 27th, Dr. Bohr dramatically announced the results of these experiments at a meeting of physicists at George Washington University, Washington, D. C.

It so happened that young Dr. Philip H. Abelson had been working on the same problem at the University of California and was just as puzzled as Dr. Meitner had been with the results he was getting. Two weeks later and he would probably have made the discovery.

At that time it was believed that it was ordinary uranium of atomic weight 238 that was being split. But this gave rise to a number of mysteries. At a meeting of the American Physical Society at Columbia University, February 17, 1939, Dr. Bohr, Dr. John A. Wheeler, of Princeton, and Dr. Fermi offered a theoretical explanation of the puzzle: It was not the uranium 238 but the much rarer uranium twin, U-235, that held the key to the release of atomic energy.

This was not proved experimentally until a year later, when a minute amount of U-235 was isolated. But in March, 1939, a few weeks after the meeting at Columbia, Professor Fermi, accompanied by Dean George B. Pegram, of Columbia, went to Washington to interest Army and Navy authorities in U-235 as a possible military weapon.

Dr. Fermi was the first to start firing atomic bullets at uranium, work for which he won the Nobel Prize. A very thin strip of aluminum foil in his apparatus, he now realizes, prevented him from making the discovery of uranium fission as far back as 1934. Now, he says, he's happy that fate, in the form of a thin strip of aluminum foil, prevented him from making the discovery at that time. Had that happened, the Germans most likely would have had atomic energy bombs in time to begin their war with it.

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

Atomic Energy Harnessed

The energy of the atom has been harnessed to produce the deadliest weapon ever devised, the atomic bomb, the War Department today announced shortly after the first of the aerial missiles cascaded upon a Japanese military target.

The initial combat use of the bomb culminated three years of intensive effort on the part of science and industry, working in cooperation with the Military. It is heralded as the greatest achievement of the combined efforts of science, industry, labor and the military in all history.

President Truman and Secretary of War Henry L. Stimson made the first announcements of the new weapon, declaring that the atomic bomb has an explosive force such as to stagger the imagination. Improvements were revealed as forthcoming which will increase several fold the present effectiveness.

While the use in combat has permitted a slight relaxation in the security that has cloaked the project, the War Department declined for security reasons to disclose the exact methods by which the bombs are produced or the nature of their action and requested that the press and radio refrain from disclosing other information as well as all those connected with the Project, other than that information released.

In broad outline, the War Department made the following disclosures:

Late in 1939 the possibility of using atomic energy for military purposes was brought to the attention of President Roosevelt, who appointed a committee to survey the problem;

In June 1942 sufficient progress had been made to warrant a great expansion of the project and the assumption of its direction by the War Department with Major General Leslie R. Groves in executive charge;

By December 1942 a decision had been reached to proceed with plant construction on a large scale; two of these plants were to be located at the Clinton Engineer Works in Tennessee and a third at the Hanford Engineer Works in the State of Washington. A special laboratory to deal with the many technical problems involved was to be located in an isolated area in the vicinity of Santa Fe, New Mexico, under the direction of Dr. J. Robert Oppenheimer;

Certain other manufacturing plants much smaller in scale were located in the United States and Canada and the facilities of certain laboratories of the Universities of California, Chicago, Columbia, Iowa State College and at other schools as well as certain industrial laboratories were utilized;

Congress has appropriated up to June 30, 1945 a total of $1,950,000,000 for the operation of the huge project;

The atomic bomb has been developed with the full knowledge

IMMEDIATE RELEASE

Atomic Energy
Harnessed

The energy of the atom has been harnessed to produce the deadliest weapon ever devised, the atomic bomb, the War Department today announced shortly after the first of the aerial missiles cascaded upon a Japanese military target.

The initial combat use of the bomb culminated three years of intensive effort on the part of science and industry, working in cooperation with the Military. It is heralded as the greatest achievement of the combined efforts of science, industry, labor and the military in all history.

President Truman and Secretary of War Henry L. Stimson made the first announcements of the new weapon, declaring that the atomic bomb has an explosive force such as to stagger the imagination. Improvements were revealed as forthcoming which will increase several fold the present effectiveness.

While the use in combat has permitted a slight relaxation in the security that has cloaked the project, the War Department declined for security reasons to disclose the exact methods by which the bombs are produced or the nature of their action and requested that the press and radio refrain from disclosing other information as well as all those connected with the Project, other than that information released.

In broad outline, the War Department made the following disclosures:

Late in 1939 the possibility of using atomic energy for military purposes was brought to the attention of President Roosevelt, who appointed a committee to survey the problem;

In June 1942 sufficient progress had been made to warrant a great expansion of the project and the assumption of its direction by the War Department with Major General Leslie R. Groves in executive charge;

By December 1942 a decision had been reached to proceed with plant construction on a large scale; two of these plants were to be located at the Clinton Engineer Works in Tennessee and a third at the Hanford Engineer Works in the State of Washington. A special laboratory to deal with the many technical problems involved was to be located in an isolated area in the vicinity of Santa Fe, New Mexico, under the direction of Dr. J. Robert Oppenheimer;

Certain other manufacturing plants much smaller in scale were located in the United States and Canada and the facilities of certain laboratories of the Universities of California, Chicago, Columbia, Iowa State College and at other schools as well as certain industrial laboratories were utilized;

Congress has appropriated up to June 30, 1945 a total of $1,950,000,000 for the operation of the huge project;

The atomic bomb has been developed with the full knowledge of and cooperation of the United Kingdom and Canada and substantial patent control has been accomplished in these countries;

1-B

Uranium is the essential ore in the production of the weapon and steps have been taken and will continue to be taken to insure adequate supplies of this mineral.

The series of discoveries which led to development of the atomic bomb started at the turn of the century when radioactivity became known to science. Prior to 1939 the scientific work in this field was world-wide, but more particularly so in the United States, the United Kingdom, Germany, France, Italy and Denmark. One of Denmark's great scientists, Dr. Neils Bohr, a Nobel prize winner, was whisked from the grasp of the Nazis in his occupied homeland and later assisted in developing the atomic bomb.

It is known that Germany worked desperately to solve the problem of controlling atomic energy.

Britain, suffering repeated air attacks early in the war, agreed to a concentration of the atomic bomb project in the United States and transferred many of her scientists to this Country to assist.

The attention of President Roosevelt was invited to the potentialities of the atomic bomb in 1939. Research which had been conducted on a small scale with Navy funds was put on a greatly expanded basis. At the end of 1941 progress had been sufficient to warrant additional expansion. In the meantime the project had been placed under the direction of the Office of Scientific Research and Development, with Dr. Vannevar Bush, Director of OSRD, in charge. At the same time the President appointed a General Policy Group, consisting of the then Vice-President Henry A. Wallace, Secretary of War Henry L. Stimson, General George C. Marshall, Dr. James B. Conant, and Dr. Bush.

The General Policy Group recommended in June 1942 that the atomic bomb project be greatly expanded and placed under the direction of the War Department. This action was taken and Major General Groves, experienced and resourceful U. S. Army construction engineer, placed in complete control. At the same time, in addition to the General Policy Group there was appointed a Military Policy Committee consisting of Dr. Bush as chairman with Dr. Conant as his alternate, Lt. General Wilhelm D. Styer, USA, and Rear Admiral William R. Purnell, USN.

The need for the weapon and its potential value led to the decision in December 1942 to start the construction of an industrial empire that was to eventually consist of entire cities and employ upwards of 125,000.

Two of the plants were constructed on a 59,000-acre government reservation eighteen miles west of Knoxville, Tennessee. It assumed the name of Oak Ridge and became the fifth largest city in the State.

The third plant was erected at the Hanford Engineer Works on a 450,000-acre government tract fifteen miles northwest of Pasco, Washington. This became the city of Richland.

A special laboratory was established in an isolated area of New Mexico, about 30 miles northwest of Santa Fe.

The ramifications of the Atomic bomb project reached such proportions that in August 1943 it was decided to establish a Combined Policy Committee, composed at the outset of Secretary to insure adequate supplies of this mineral.

The series of discoveries which led to development of the atomic bomb started at the turn of the century when radioactivity became known to science. Prior to 1939 the scientific work in this field was world-wide, but more particularly so in the United States, the United Kindgom, Germany, France, Italy and Denmark. One of Denmark's great scientists, Dr. Neils Bohr, a Nobel prize winner, was whisked from the grasp of the Nazis in his occupied homeland and later assisted in developing the atomic bomb.

It is known that Germany worked desperately to solve the problem of controlling atomic energy.

Britain, suffering repeated air attacks early in the war, agreed to a concentration of the atomic bomb project in the United States and transferred many of her scientists to this Country to assist.

The attention of President Roosevelt was invited to the potentialities of the atomic bomb in 1939. Research which had been conducted on a small scale with Navy funds was put on a greatly expanded basis. At the end of 1941 progress had been sufficient to warrant additional expansion. In the meantime the project had been placed under the direction of the Office of Scientific Research and Development, with Dr. Vannevar Bush, Director of OSRD, in charge. At the same time the President appointed a General Policy Group, consisting of the then Vice-President Henry A. Wallace, Secretary of War Henry L. Stimson, General George C. Marshall, Dr. James B. Conant, and Dr. Bush.

The General Policy Group recommended in June 1942 that the atomic bomb project be greatly expanded and placed under the direction of the War Department. This action was taken and Major General Groves, experienced and resourceful U. S. Army construction engineer, placed in complete control. At the same time, in addition to the General Policy Group there was appointed a Military Policy Committee consisting of Dr. Bush as chairman with Dr. Conant as his alternate, Lt. General Wilhelm D. Styer, USA, and Rear Admiral William R. Purnell, USN.

The need for the weapon and its potential value led to the decision in December 1942 to start the construction of an industrial empire that was to eventually consist of entire cities and employ upwards of 125,000.

Two of the plants were constructed on a 59,000-acre government reservation eighteen miles west of Knoxville, Tennessee. It assumed the name of Oak Ridge and became the fifth largest city in the State.

The third plant was erected at the Hanford Engineer Works on a 450,000-acre government tract fifteen miles northwest of Pasco, Washington. This became the city of Richland.

A special laboratory was established in an isolated area of New Mexico, about 30 miles northwest of Santa Fe.

The ramifications of the Atomic bomb project reached such proportions that in August 1943 it was decided to establish a Combined Policy Committee, composed at the outset of Secretary of War Stimson, Dr. Bush, Dr. Conant for the United States; Field Marshal Sir John Dill and Colonel J. J. Llwwellin, for the United Kingdom; and Mr. C. D. Howe for Canada. Col. Llewellin, was later replaced by Sir Ronald I. Campbell who in turn was succeeded by the Earl of Halifax; the late Field Marshal Dill was succeede y Field Marshal Sir Henry Maitland Wilson. The U ted States members have had as their scientific adviser, Dr. Richard C. Tolman; the British, Sir James Chadwick; and the Canadian, Dean C. J. Mackenzie.

The dropping of the first atomic bomb upon a Japanese Military target brings to fruition a spectacular new discovery in the field of science. In its development it appears that in the decades ahead there will ultimately flow multiple benefits for all mankind. To insure a study of the best use of the discovery the Secretary of War has appointed an Interim Committee consisting of the following:

The Secretary of War, Chairman, James F. Byrnes, now Secretary of State, Ralph A. Bard, former Under-Secretary of the Navy, William L. Clayton, assistant Secretary of State, Dr. Bush, Dr. Conant, Dr. Karl T. Compton, President of the Massachusetts Institute of Technology, and George L. Harrison, alternate chairman, special consultant to the Secretary of War and President of the New York Life Insurance Company. Assisting this group as a scientific panel are Dr. J. R. Oppenheimer, Dr. E. O. Lawrence, Dr. A. H. Compton and Dr. Enrico Fermi.

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

This release is prepared as background information on the town of Oak Ridge, Tenn., the site of the Clinton Engineer Works, one phase of this Government's Atomic Bomb Project.

OAK RIDGE, Tenn. During the past thirty-six months, one of the most remarkable cities in the world has come into being on a site where only oak and pine trees dotting small farms had been before.

In three years, the town of Oak Ridge, 18 miles west of Knoxville, has not only grown from nothing to the fifth largest city in Tennessee, with a population of nearly 75,000, but in the course of this time has managed to become one of the historic cities of America, a town that will ever remain associated with the greatest secret project of World War 11.

Oak Ridge is the heart of this Government's Atomic Bomb Project, which, under the camaflouged name of the Manhattan Engineer District, operated by the War Department under the immediate direction of Major General Leslie R. Groves in Washington and Colonel Kenneth D. Nichols at Oak Ridge, succeeded in harnessing atomic energy into the most devastating weapon in history, and in so doing, built a great industrial empire.

Oak Ridge, situated on what is known as Black Oak Ridge, one of five principal oak and pine-covered ridges in the reservation area, was named by Colonel (now Brigadier-General) J. C. Marshall, former District Engineer of the Manhattan District. The name was chosen from among many suggested by workers. General Marshall was succeeded as District Engineer by Colonel Nichols.

Few persons outside of that section of the South in which Oak Ridge is situated and fewer throughout the country knew much about Oak Ridge, even though an industry which was the best-kept secret of the war, was being built around it. In addition to the towns inhabitants, some 200,000 residents of Knoxville knew that Oak Ridge had been built around a vital, secret war project. But they learned to avoid discussions involving secret projects and cooperated in maintaining security. Thousands of workers who had been employed on construction and then left for other parts when they were no longer needed, refrained from overly discussing Oak Ridge and its plants with strangers outside the reservation.

In many respects, Oak Ridge is unique in history. There have been other "hidden" cities, but never one that has grown so swiftly under the pressure of war and secrecy. What is probably most remarkable about Oak Ridge is the fact that the inhabitants themselves, with the exception of a few key men, knew nothing about the city's purpose, what it was built for or what its giant plants were producing. This was not only true of the families of those employed in the plants but also of the workers themselves. The work was so compartmentalized that each worker knew only his own job and had not the slightest inkling of how his part fitted the whole.

Only certain top-ranking scientists, engineers and Army officers knew the full implications of the project, but even in such cases there were limitations. The head of one plant, for instance, was kept completely insulated from other plants where different processes and methods were used.

Not only did the workers not know what they were producing in the mammoth plants that use tremendous amounts of electrical energy, but the vast majority could not be sure they were actually producing anything. They would see hugh quantities of material going into the plants but nothing coming out. This created an atmosphere of unreality, in which giant plants operated feverishly day and night to produce nothing that could be seen or touched.

Oak Ridge is the residential center for the workers in one sub-division of the Manhattan Engineer District, known as Clinton Engineer Works. The Clinton Engineer Works covers a hugh Government reservation of 59,000 acres of which Oak Ridge proper covers about eight square miles. Oak Ridge is the administrative center for the entire Manhattan District, which includes the 631-square-miles Hanford Engineer Works near Pasco, Wash. and other divisions.

The plants at Clinton Engineer Works, where raw material is separated by three different methods, include more than 425 buildings. The town of Oak Ridge has nearly 10,000 family units, 13,000 dormitory spaces, more than 5,000 trailers and more than 16,000 hutment and barracks spaces. Its population of nearly 75,000 makes it the fifth largest in Tennessee, topped only by Memphis, Nashville, Knoxille, and Chattanooga.

The site, acquired in the Autumn of1942, was chosen because of its accessibility to power and water, its remoteness from the Coast and its isolation. The first family moved into its trailer home on July 3, 1943, and the first house was occupied on July 27 of that year. At the height of its construction period, one thousand houses were built per month.

With the bulldozers, the carpenters, plumbers, and electricians also came books, musical instruments, artists' paint and brushes and all the other paraphernalia of American culture - a culture reflecting every section of the country, for Oak Ridge is an extremely cosmopolitan place, its residents coming from virtually every state in the Union.

Simultaneously with the roads and streets, sewers and waterworks went the building of schools, a library, theatres, a hospital, a dental clinic, recreation centers and athletic facilities. By June 1945, the town had one high school and eight elementary schools with another grammar shcool under construction. At the Spring term of 1945, there were over 11,000 pupils and 317 teachers. The Public Library had around 9,000 books and 10,000 members holding cards. A hospital of 300 beds was built at a cost of over $1,000,000 and a dental service building erected at a cost of $92,000. The total outlay for schools, including several existing rural schools taken over at the start of the work, was $3,700,000.

Hospitalization and medical care is provided through an insurance plan, the worker paying $2 per month for all hospital and medical bills, except home care. Under the direction of Colonel Stafford Warren, formerly professor of Radiology, School of Medicine and Dentistry, University of Rochester, and a staff of Army Doctors, the health, medical and dental facilities rank among the best.

The medical insurance plan is on a voluntary basis and now pays for itself, though it required a subsidy for the first six months. Subscription is by groups, such as chemists, physicists and administrative personnel. The overhead cost is 16 per cent.

More than 300 miles of roads either have been built or improved in the area. Around 55 miles of railroad were built on the project to transport equipment and material. Buses on the area number nearly 350, while an additional 400 buses operate off the area to carry non-resident workers at the project to and from their homes. From July 1944 through June 1945 the on area buses carried 22,252,479 passengers. During June 1945 they carried 2,401,070 passengers.

There are 17 different organized religious bodies at Oak Ridge, At first all worshipped at different times at one Colonial-style little church called Chapel on the Hill which rests against a wooded background. Later, another church building was constructed and a third was in process of being built this summer. A school and theatre auditoriums also are utilized for religious services.

Oak Ridge has 13 supermarkets, nine drug stores and seven theatres. It has 17 major eating facilities, including nine cafeterias, five restaurants and three lunch rooms. There are also a number of minor eating establishments.

Oak Ridge has a high health standard and a low crime record, with hardly any crimes of violence. Its population is probably the youngest age group in the country and has a very high birth rate, believed among the highest in the country.

At the time the War Department took over, there were around 3,750 residents on the land which was taken into the reservation. These were scattered over the entire 59,000 acres, which included the hamlets of Robertsville, Wheat and Scarboro and a large number of small farms on a total of over 800 separate tracts of land.

The area was among the first in Tennessee to be settled and the Government went to great pains to resettle these uprooted families. Many of them took jobs on the site.

The Clinton Engineer Works is bounded on the East, South and West by the tortuously-winding Clinch River for a total distance of 36 miles. Within the reservation, there are five main ridges, running east and west. The northernmost is Black Oak Ridge. Next in order come East Fork Ridge, Pine Ridge, Chestnut Ridge and Haw Ridge, which are wooded with oak and several species of pine trees. The variety of vegetation in this vicinity is said to be wider than anywhere in the United States, the region constituting a meeting ground between northern and southern varieties of flora.

Being near Knoxville, the site is not far from the Great Smoky Mountain area which lies east and southeast of Knoxville. To the west are the Cumberland Mountains. Largest towns beside Knoxville near the area are Clinton, from which the Works derives its name; Harriman and Lenoir City. The project covers part of two counties, Anderson and Roane, with the greater part being in Anderson. It is the heart of the TVA country and is situated about 20 miles from Norris Dam.

The town of Oak Ridge is in the northeastern part of the area about 8 miles from Clinton. One production plant is situated between Pine and Chestnut Ridges. Another area is at the extreme western part of the reservation and is 15 miles from Oak Ridge proper. An experimental plant, the pilot plant for the process at the Hanford Engineer Works, near Pasco, Washington is at the southwestern part of the reservation between Chestnut and Haw ridges. Another process plant is in the area of a huge steam plant.

The total amount of lumber used by the Clinton Engineer Works from the latter part of 1942 to May 1, 1945, was in excess of 200,000,000 board feet, almost the output of the State of Minnesota for an entire year. Around 400,000 cubic yards of concrete were used for foundations and some of the structural frames in the plant areas, or one-eight the amount of concrete used in Boulder Dam. Around 55,000 cars of material and equipment were shipped to the Clinton Engineer Works from November, 1942 through June, 1945.

During the peak construction period in July and August, 1944, Clinton Engineer Works used 800 pieces of heavy construction equipment, 5,600 of light construction equipment, 2,000 air driver tools, and nearly 6,000 items of automotive equipment, including 1,000 passenger cars, 400 station wagons, 1,300 pick-up trucks, 750 buses and 2,500 construction-type trucks. The total number of pieces of equipment used in that period exceeded 14,000 valued at approximately $20,000,000!

Most of the automotive and construction equipment (light and heavy) was obtained from previously-completed war construction jobs by Government transfer, with practically all the major construction pieces obtained from other Corps of Engineer construction jobs.

In July 1945 about 50 per cent of Oak Ridge's population lived in houses and apartments, about 21 per cent in dormitories, another 21 per cent in trailers and about 8 percent in hutments. The houses vary in size but are comfortable, roomy and homey. The Guest House, the town's pleasant two-story Inn, frequently houses many of the world's most distinguished scientists and other persons of note, including Secretary of War Henry L. Stimson during an inspection visit last Spring.

Cultural activities at the project began practically when the first residents moved into their new homes, on which rentals per month range from $22 to $73 for family houses, $10 to $15 monthly per person in dormitories, and $30 to $50 monthly on apartments. The cultural activity includes the Singing Society, the Oak Ridge Community Chorus, the Oak Ridge Community Band and String Orchestra, the Oak Ridge Symphony and the Music Society, which are sponsored by the Oak Ridge Recreation and Welfare Association. There is also the Oak Ridge Artists' Society and a Little Theatre.

Those athletically inclined formed an Independent Baseball League, Horseshoe Pitching League, Women's Softball League and badminton, tennis, handball, archery and gym groups. Clubs included College Women's, Artist, Chess, Stamp, Duplicate Bridge, Saddle, Model Airplane and state clubs formed by residents from widely scattered parts of the country.

Oak Ridge also has its own weekly newspaper, the Oak Ridge Journal. Like all other cultural and recreational activities at the project, it is backed by the Oak Ridge Recreation and Welfare Association, a non-profit citizens' organization which derives its revenue from self-liquidating recreational enterprises.

#10

ARMY SERVICE FORCES
UNITED STATES ENGINEER OFFICE
MANHATTAN DISTRICT
OAK RIDGE, TENNESSEE

IN REPLY REFER TO

SECURITY MESSAGE TO THE PRESS

1. Security has been and continues to be of paramount importance to the Manhattan District. The magnitude of this project and the scope of its activities necessitated stringent security precautions in order that the interests of the United States would be fully protected.

2. For example, each person was carefully screened to insure that only persons of known loyalty and integrity were admitted to any of the many project installations; information was compartmentalized in order that each person would have access to only that information necessary to accomplish his or her part of the work; an elaborate security education program was instituted to develop security responsibility; extreme precautions were taken against sabotage and espionage; Military Police provided internal and perimeter control. These measures and many others were used in order not to compromise the security of what had to be "the best kept secret of the war".

3. You members of the press are the first to enter the project without formal clearance by the Military Intelligence. You will see much and hear much. In the interests of national security, we ask that you print or disseminate only that information released in the official release or such local information as is cleared by Lt. Robinson.

4. It is our desire that the people of the United States know what their Government is doing providing it does not prejudice the war effort. We are sure we can depend on your cooperation.

K. D. Nichols
K. D. NICHOLS,
Colonel, Corps of Engineers,
District Engineer.

DATA ON CLINTON ENGINEER WORKS

1. Geographic Data

Area of Reservation - 59,000 acres
Distance from City of Knoxville - 18 miles
Distance from Norris Dam - 20 miles
Distance from Town of Clinton - 8 miles
Overall Reservation Dimensions - greatest length about 17 mi
- greatest width about 9 mile

2. Significant Dates

Preliminary site preparation started - 2 November 194
First carload of materials received - 3 November 194
First building started (Administration Bldg.) - 25 November 194
First plant buildings started - 1 February 194
First production started - 27 January 1944
First family moved into trailer - 3 July 1943
First family moved into house - 27 July 1943

3. Living Quarters

House or apartment - nearly 10,000
Dormitory spaces - 13,000
Trailers - over 5,000
Hutment and Barrack spaces - over 16,000

4. Schools

1 high school - capacity 1,100 pupils
1 jr. high school - capacity 2,500 pupils
8 elementary schools - capacity 6,500 pupils

Total No. teachers - 317

5. Hospitals & Clinics in Oak Ridge

one 300-bed hospital
one 27-chair dental clinic

6. Public Library

10,000 members
9,400 books

ARMY SERVICE FORCES
United States Engineer Office
Manhattan District
Oak Ridge, Tennessee

GENERAL INFORMATION TO THE PRESS

The following general information will be of interest and assistance to you during your visit to the Clinton Engineer Works at Oak Ridge.

a. Your guide will provide you with transportation to Oak Ridge.

b. He will issue to you a pass which will serve as your identification, while on the Area, as an accredited member of the Press.

c. You will be cleared through the Perimeter Gate and will be taken to Caspar Dormitory to the office of Lt. George O. Robinson, public relations representative of the Manhattan District.

d. You will be assigned quarters upon your arrival at Caspar Dormitory.

e. Facilities are available to you for your meals at the Guest House dining room, Central Cafeteria adjacent to Caspar Dormitory, or any of the many other cafeterias and restaurants on the Area.

f. Telephone and Western Union facilities are available for your use at Caspar Dormitory.

g. Twenty-four hour laundry and cleaning service can be obtained at Caspar Dormitory.

h. Dormitory advisors are on duty at Caspar Dormitory to assist you and to make your stay as comfortable as possible.

i. Tours of the Area will be conducted for your pleasure and information.

j. Transportation to Knoxville will be available for you when you desire to return.

k. Lt. Robinson will be available at all times to assist you in obtaining all information available.

K. D. Nichols
K. D. NICHOLS,
Colonel, Corps of Engineers,
District Engineer.

7. Eating Facilities in Oak Ridge

9 Cafeterias
5 Restaurants
5 Lunchrooms

8. Roads and Railroads

Over 300 miles of roads built or improved
55 miles of railroad built

9. Bus System

On Area buses	- about	350
Off Area buses	- about	400
Passengers carried July 1944 to June 1945	- about	22,250,000
Passengers carried month of June 1945	- about	2,400,000

10. Commercial Facilities - Over 125, including -

13 supermarkets
9 drug stores
7 theaters, and other shops of various sorts

11. Materials Used in Construction

Lumber	- over	200,000,000 board feet
Concrete	- nearly	400,000 cubic yards
Structural Steel	- over	50,000 tons
Misc. Iron & Steel	-	50,000 tons

12. Construction Equipment in Use

At Peak of Construction -

Heavy Construction Equipment	- 800 pieces
Light Construction Equipment	- 5,600 pieces
Air Driven Tools	- 2,000 items
Automotive Equipment	- 6,000 units

Total of over 14,000 separate items of construction equipment

13. Population - Nearly 75,000

Distribution in Living Quarters -

Houses & Apartments	-	50%
Dormitories	-	21%
Trailers	-	21%
Huts & Barracks	-	8%

14. Rental Rates

Dormitories	-	$10 to $15 monthly (per person)
Houses	-	$22 to $73 monthly (per family)
Apartments	-	$30 to $50 monthly (per family)
Constr. Workers' Barracks	-	$10 to $12 monthly (per occupant)
Hutments	-	$6 (per occupant) $25 (per family)
Trailers	-	$15 (per family)

15. Employment

Present total - about 75,000
Includes 26,000 construction and 49,000 operations

Peak Construction Force was 47,000

16. Expenditures to date

Total	-	$1,665,142,423.70
CEW	-	1,106,393,000.00
HEW	-	382,401,000.00
Santa Fe	-	54,429,000.00

(The difference of $121,919,423.70 between $1,665,142,423.70 and $1,543,223,000.00, which is the total of CEW, HEW and Santa Fe, is accounted for under miscellany).

WAR DEPARTMENT
WASHINGTON, D.C.

IMMEDIATE RELEASE

This release is prepared as background information on one of the production areas at Clinton Engineer Works, Oak Ridge, Tenn., and is for use with the story on the Atomic Bomb Project.

OAK RIDGE, Tenn. ----- A complicated laboratory apparatus, used in pre-war days to separate light from heavy isotopes of the same element on a sub-microscopic scale, has been transformed under the stimulus of a national emergency into a giant industrial plant to produce the devastating material used in an atomic bomb.

It has been metamorphosed into a plant covering 500 acres. From a mere few feet it has stretched into a length of two miles; instead of sub-microscopic amounts, it turns out uranium 235 (U-235) on a production basis for use against Japan in atomic bombs.

A modern industrial miracle, the plant, as part of the gigantic project known as the Manhattan Engineer District, is situated on a 59,000-acre Government reservation, the Clinton Engineer Works, 18 miles west of Knoxville, which includes the newly-built government-operated town of Oak Ridge with a population of nearly 75,000. The plant is one of two large and one small production units on the area.

Built by the Stone & Webster Engineering Corporation, and operated under government contract by the Tennessee Eastman Corporation, a subsidiary of Eastman Kodak, the plant has a total of 270 buildings of a permanent nature, including five main large chemistry buildings, repair shops, storage, an administration building, two cafeterias, a training school and a host of auxiliary buildings. Its operating personnel totals 24,000.

Construction of the plant began Feb. 2, 1943 and the first units were placed in operation Jan. 27, 1944. The building involved problems of construction and design never before encountered. Since it became the first and only one of its kind in the world, there was no time even to construct a small pilot plant to carry out the methods of separating the uranium atoms under the electromagnetic process as developed by Prof. Ernest O. Lawrence, of the University of California, one of the world's most brilliant experimental physicists, who won the Nobel prize for his invention of the cyclotron, an atom-smashing apparatus.

Credit for the scientific development which made possible a remarkable transmutation from the laboratory into a giant industrial plant in an incredibly short time is largely due to Professor Lawrence, who overcame apparent evidence that the electromagnetic method would not be practical for large scale separation of U-235.

Ripping apart his cyclotron in 1941 and putting the magnet to use in a large mass spectrometer, Professor Lawrence by mid-summer of 1942 had shown that the electromagnetic method might be practical and that a large enough electromagnetic plant might have a critical bearing on the war. Professor Lawrence and his associates were then directed to abandon plans for a pilot plant and re-orient their efforts toward the building of a large industrial plant and placing it in operation in the shortest possible time. Thus followed the production area at Oak Ridge.

Stone & Webster was selected to design and build the plant. General Electric, Westinghouse and Allis-Chalmers were the major suppliers of equipment. The Tennessee Eastman Corporation was picked to operate the plant. Offices were established at the University of California Radiation Laboratory early in 1943. Industrial scientists and engineers worked in closest conjunction with the laboratory's physicists, chemists and engineers to translate data, procedure, techniques and equipment into a practical functioning plant design. Meanwhile, tests of the mechanical and electrical equipment for the plant's installation were carried on at the Radiation Laboratory simultaneously with the construction of the plant at Clinton Engineer Works.

The plant uses a tremendous amount of electric power and this was a compelling reason for its location in the Tennessee valley.

Because of the great scarcity of copper and because time was more precious than gold, millions of pounds of silver were borrowed from the Treasury Department for use as winding coils and bushers for the multitudinous magnets. Silver is as good a conductor of electricity as copper and it is not harmed by the passage of the current. It will be returned after the war is over.

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

This release is prepared as background information on one of the production areas at Clinton Engineer Works, Oak Ridge, Tenn., and is for use with the story on the Atomic Bomb Project.

OAK RIDGE, Tenn. A huge "U"-shaped building housing thousands of complicated pieces of apparatus is the home of the gaseous diffusion process for concentrating uranium (U-235) for use in atomic bombs.

The vast structure and its process equipment represent a scientific and engineering achievement of the first magnitude. It is a monument to the ingenuity and vision of America's top scientists and development engineers, headed by Prof. Harold C. Urey, the discoverer of "heavy water" and Prof. John R. Dunning, both of Columbia University, and P. C. Keith of the Kellex Corporation.

The main building in this vast plant is constructed in the form of a giant letter "U", each side 2,450 feet long, and averaging 400 feet in width and 60 feet in height. The total area of the main building is 5,568,000 square feet.

The plant contains 70 additional buildings, bringing the total area to 600 acres. These include a conditioning building, a giant in itself, its main floor and basement covering a total ground area of 800,000 square feet. This building "conditions" the equipment before installation. The plant has a repair shop of 400,000 square feet and a special warehouse containing 300,000 different types of spare parts (several hundred of each type).

Development of certain porous barriers necessary in the process was only one of the formidable problems that had to be solved in building this mammoth plant. New types of all kinds of equipment and the most delicate measuring devices were vitally necessary.

As an auxiliary requirement, a huge powerhouse was constructed in the area with a capacity of 238,000 kilowatts, the largest initial single installation of its kind ever built. It has three giant boilers, each producing 750,000 pounds of superheated steam per hour.

A number of the country's leading construction companies participated in the designing and construction of the plant. It was designed by the Kellex Corporation, a subsidiary of the Kellogg Company, and constructed by the J. A. Jones Construction Co. It is operated by the Carbide and Carbon Chemical Corporation. Ford, Bacon and Davis designed and constructed the conditioning building.

Construction of the main process plant started Sept. 10, 1943, and the first units began operating Feb. 20, 1945. The construction forces of this particular phase reached 25,000 on May, 1945. The peak operation force for the process is about 12,000.

Construction of the power plant started June 1, 1943, and began initial operation April 17, 1944. It reached its full generating capacity in July, 1945.

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

This release is prepared as background information on one of the production areas at Clinton Engineer Works, Oak Ridge, Tenn., and is for use with the story on the Atomic Bomb Project.

OAK RIDGE, Tenn. In addition to two giant plants at the Clinton Engineer Works here which concentrates uranium 235 (U-235) for use in atomic bombs against Japan, there is also a "little plant" which uses the thermal diffusion method for concentrating the raw material.

This plant comprises about 20 structures. The largest building is 525 feet long, 75 feet high and 82 feet wide. The construction was begun July 13, 1944, and completed December 15, 1944. Its first unit started operating, however, on October 13, just three months to a day from the start of construction. Its peak construction force was 1,917 persons and the operating personnel numbered around 2,000.

The research and development work for the plant was done by the United States Naval Research Laboratory and it was designed and constructed by the H. K. Ferguson Company, of Cleveland, Ohio. It is operated by the Fercleve Corporation, an affiliate of the Ferguson Company.

The plant devours many pounds of steam per hour, which is obtained at present from a large power house in the immediate area. An auxiliary steam plant with 12 boilers is now under construction.

The boilers were originally intended for destroyer escorts and were obtained through cooperation of the Navy. They were shipped to Tennessee through inland waterways from Orange, Texas, where they were built.

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

This release is prepared as background information on the Hanford Engineer Works, one of the phases of the Atomic Bomb Project.

RICHLAND VILLAGE, Wash., -- In this newly-built, pleasant little town 15 miles northwest of Pasco, the inhabitants have good jobs and pleasant Government-owned homes on the banks of the swiftly flowing Columbia River. But when the curtain was lifted on the Atomic Bomb Project, the vast majority of the workers and their families, some 17,000 people, did not have the slightest idea of what they were producing in the gigantic Government plants, some 30 miles away.

Previously <u>no</u> mention was ever made in private conversations of the enormous structures scattered over an area of more than 400,000 acres only a short distance away. Talking to them did <u>not</u> give one the slightest inkling of the reason for existence of the very town they live in, of the force that brought them here from Maine to California.

Hanford Engineer Works, as this particular division of the Project is known, is one of the largest and most unique of the Manhattan Engineer District's war construction units for the production of the raw materials for atomic bombs.

Located in the central portion of the State of Washington, between the Yakima Range and the Columbia River, Hanford Engineer Works lies on an undulating table land containing in the most part an uninhabited region of gray sand, gray-green sagebrush, and dried water courses.

It was constructed in this isolated expanse of wasteland by E. I. du Pont de Nemours & Company, which also has the contract for operating the plant. The scientific research was done under the auspices of Chicago University. The story of its construction and operation is a story of ingenuity, intelligent planning, and bold innovations in design and construction in the middle of one of America's great deserts. It is a story of action, sacrifice, high morale, and loyal hard-working employees. It is the epic of American industry's and the American workers' answer to the challenge of a great emergency.

The nearest community of any size is Yakima, some 40 miles westward, which has a normal population of about 30,000.

The area owned or controlled through lease amounts to over 600 square miles. Of this total, 230 square miles are owned by the Government. The remaining property owned is accounted for by certain power and irrigation properties and rights, which were integral with the land and by the acquisition of nearby Richland Village, as a site for a housing development and the administration center.

The manufacturing area is subdivided into three huge areas, and each of these three in turn is again subdivided into sections covering miles of ground. One of the three main areas contains three enormous structures where material is produced. The second area contains three huge chemical plants where the material is purified and concentrated. The third prepares the raw materials.

Before the Project could be built it was first necessary to build housing for the construction workers at Hanford, which mushroomed up practically overnight on the south bank of the Columbia River some eight miles away. This government town grew to 60,000 in the course of two years.

A host of formidable new problems such as science had never faced before had to be overcome in the production of the materials and their chemical purification.

Not only was it necessary to develop an entirely new chemistry for concentrating this material but plants had to be designed for performing all the complicated operations involved by remote control, behind heavy concrete walls to protect the workers completely against even the fear of danger.

When the process was first discovered in March, 1941, and the building of plants for producing it was first contemplated, leaders in chemistry feared that it might take at least five years to develop the chemical methods involved. This would have been too late for use in the war.

Since no more than microgram (one-millionth of a gram) amounts of the material could be made by the methods then available, it became mandatory to work on an extremely small scale of operation, namely, the so-called "ultra-micro scale."

On the basis of these "bits of nothing," the huge chemical plants were designed some 10,000,000,000 times greater in scope.

To do so they had to use a host of chemicals in exact proportions, which meant that they had to be used in quantities of micrograms and fractions of micrograms, within a limit of accuracy of three percent of one microgram. A human breath weighs about 750,000 micrograms, while a dime weighs 2,500,000 micrograms.

To achieve this unheard of accuracy in weighing, special laboratory equipment with extremely high sensitivity had to be designed and built.

Work continued on approximately this scale of operation until about January, 1944, at which time milligram amounts became available. Since then the investigations have continued with larger and larger amounts of material. Experiments on a gram scale became possible in March, and experiments on a ten gram scale were begun at the New Mexico Site in July, 1944. After that time the scale became substantially larger.

On the basis of these ultra-micro scale procedures of the Chicago group a pilot plant was built at the Clinton Engineer Works in Tennessee where the chemistry was further developed.

Chemical plants costing many millions of dollars were thus designed, constructed, and put into successful operation on the basis of this early work with only micrograms. This is the first time that a scale up of anything near this amount has been accomplished in an industrial development.

The finished plants at Hanford Engineer Works are huge rectangular structures 800 feet long. They are the most remarkable chemical plants ever conceived or designed by man, where enormous quantities of materials are handled through many successive processes with no human eye ever seeing what actually goes on, except through a complicated series of dials and panels that enable the operators to maintain perfect control of every single operation at all times.

Each operation is performed in a remote cell, and when it is completed the treated material invisibly moves on to the next cell, until at the end of the successive processes the material emerges, ready for the next stage at other plants.

The construction of the Hanford Engineer Works presented innumerable and unprecedented problems which stemmed from several basic requirements established by research and development, engineering design, and policy. The principal factors which created these problems were:

(1) The magnitude of the project.
(2) The distances between the several manufacturing plants to be constructed.
(3) The isolated location of the site.
(4) The time element which demanded that construction proceed without awaiting completion of engineering design or even of the basic research data.
(5) The unusually high quality of construction required in many instances.
(6) The extreme and rigid requirements of military security.

The magnitude of the work of construction is indicated by the following general items selected at random:

Excavation amounted to 25,000,000 cubic yards of earth, a quantity approximately 1/4 of the earth moved in the construction of the Fort Peck Dam, the largest earth dam ever constructed.

A total of 40,000 car loads of material were received on the site equivalent to a train 333 miles long which is greater than the distance from Chicago to Louisville.

More than 780,000 cubic yards of concrete were placed which amount is approximately equal to 390 miles of concrete highway 20 ft. wide by 6 inches thick.

Excluding railroad rail and special steels, about 40,000 tons of steel were used in building construction which is equivalent approximately to the displacement of a battleship.

About 1,500,000 concrete blocks and 750,000 cement bricks were used in plant construction or sufficient to build a one foot by six foot wall over 30 miles long.

More than 11,000 poles were required for the electric power and lighting systems or approximately the number required to build a single pole power line from Chicago to St. Louis.

More than 8500 major pieces of construction equipment were used.

Approximately 345 miles of permanent plant roads were constructed on the site which is about the distance from Pittsburgh to Richmond.

The necessity for separating the several areas by relatively great distances from each other and from inhabited areas imposed abnormal problems for transportation of men and materials. These distances are emphasized by the fact that 340,000,000 passenger-miles of bus transportation were furnished during the construction phase of the work. This is approximately equivalent to the transportation of 110,000 persons across the United States.

The isolation of the site from any existing centers of population presented serious problems with respect to many phases of construction. These problems were related primarily to the procurement, transportation, housing, feeding, health, morale, and retention of a maximum total construction force of about 45,000 persons which number was reached in June of 1944.

The urgent need for placing the plant in operation at the earliest possible date precluded the possibility of delaying the start of construction work. In many instances, construction work was in progress during periods when basic research had not been fully developed. Consequently, the burden of construction planning, scheduling, and procurement was extremely great.

Washington, D. C.

IMMEDIATE RELEASE

Townsite Established Near Laboratory

Decision to locate the Atomic Bomb Project Laboratory on a mesa an hour's drive from Santa Fe, N. M., meant that it was necessary for the Army Engineers to construct an entirely new town to house the workers and their families. Primary reason for selection of the isolated site was security.

When the Army took over the property early in 1943 there were a few buildings which had been occupied by the Los Alamos Boys' School. New buildings began going up at once. Today there are 37 in the main technical area and about 200 others on the property used for the project itself. Three hundred buildings containing 620 family units, also were constructed, as well as military barracks, hospital buildings and structures for administrative offices.

Dr. J. R. Oppenheimer, one of the foremost physicists in the country and director of the laboratory, came to the site during early stages of construction. Other scientists and technical workers followed soon after.

Scientific groups which had been working on the project elsewhere in the country moved in rapidly, bringing their equipment with them. The Harvard cyclotron was in operation six weeks after it had reached the site.

Nearest railroad facilities are at Albuquerque and Santa Fe. This made it necessary to truck everything from those cities, at least. The road from Santa Fe is a tortuous one, and in the beginning, the last 18 miles were not paved. This was bad enough for passenger cars, and presented a particularly tough problem in hauling heavy loads.

Today the community has more than 7,000 residents. Slightly less than two thirds are civilian men, women and children and the remainder military personnel. The post commandant is Col. Gerald R. Tyler.

First need of arriving personnel was housing. Various types were constructed, to meet different needs. There are three-room prefabricated, individual houses; three room apartments, eight to a building, and four and five room apartments, four in a two-story unit. There are some hutments, Quonset-type huts and government and personally-owned trailers.

Dormitories have been constructed for unmarried personnel, or persons who do not have their families with them. Rents, for family groups, are based on earnings. Apartments are unfurnished and family groups ordinarily bring their furniture with them, although some items of government furniture have been available.

The community is not unlike any other community of similar population in the United States.

Housewives shop for food for daily meals at an Army commissary where ration points are just as important as elsewhere and a "trading post" offers items needed in everyday life and there are the usual Post Exchange stores.

Personnel living in dormitories eat in mess halls, or in a large cafeteria. There is also a dining room with waitress service.

A "town council" of eight elected members serves in an advisory capacity, meeting with representatives of the project and of the Commanding Officer. There is a school board, appointed by Col. Tyler and Dr.

Oppenhei(, which oversees operation of an accredited elem(ary school an. high school. There also is a nursery school for younger children, to permit wives to work on the project.

There is plenty of opportunity for outdoor recreation. The summer months offer a chance to play golf on a nine-hole course built by volunteer labor, or to engage in baseball or tennis. In winter there are skiing and skating. A number of residents own horses.

Two theaters provide movies and a small, local radio station broadcasts news of interest to the community and musical programs. There also is a free library.

A modern fire department is on duty and there is a post hospital.

Groups with kindred interests have been formed. There is a little theater organization as well as singing societies, dance groups, etc. Since a great many of the scientific and technical workers have the same interests there is considerable social activity.

The community may be isolated, but the personnel has not given up living as any American group would anywhere else in the nation.

HIROSHIMA

1. Strategic Industries.

An Army city, Hiroshima, is a major quartermaster depot and has been a leading port of embarkation. It contains large military supply depots; The principal industries are ordnance (large guns and tanks), machine tools and ordnance/aircraft parts.

2. Location of Industry.

The leading industrial and military storage districts are located outside the heavily built up regions, to the SSE and E of the city proper.

3. Construction.

Residential construction is typically Japanese. There are two types of warehouses. The Ujina Port region is congested with both fireproof and combustible warehouses, open stores and small factories. The large depot at the E side of the bay consists of well-spaced, but combustible warehouses. Industrial construction varies from very heavy in the case of the large ordnance works to the light engineering type along the E side of town proper.

4. Size.

Population - latest census - 318,000
The city proper, including the Ujina Port district, measures roughly 4 miles (N/S) by 3 miles (E/W). The industrial and military storage district to the east measures roughly 3 miles (NW/SE) by 1 mile.

5. Number of stories.

Generally 1 - 2 stories.

6. Roof cover.

Roof cover in the city proper is approximately 40 per cent. In Ujina Port district and the storages to the north, it averages 15 - 25%. The industrial/military districts to the east are separated by large open spaces.

7. Contents of buildings.

Military storages include clothing and other general gear, finished small arms, food and miscellaneous supplies.

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

Major General Leslie R. Groves
Directs Vast Project

A soft-spoken Major-General with a flair for the "impossible" emerged today from the shadows of Army-imposed anonymity to be revealed as the driving force behind a $2,000,000,000 "calculated risk" which he directed to successful completion in three years as one of the world's greatest scientific and engineering achievements, the large-scale tapping of the energy within atoms to produce a new weapon of war.

He is 48-year old Leslie Richard Groves, a West Point graduate who stood fourth in his class in 1918 and who has a way about him--a way of getting things done.

His story and activity parallel in interest the history and attainments of the Manhattan Engineer District--the "cover" name given this Government's atomic bomb project--and its allied developments. Actually, he and the Manhattan District are synonomous; he not only selected its name, but for three years weighed his decisions in the face of a suspense and an uncertainty rarely equalled.

Clothed by Secretary of War Henry L. Stimson in an anonymity attuned to the development of the War's best-kept secret, General Groves, as the Officer in Charge of the atomic bomb project, fitted together the multifarious pieces of the vast, country-wide jigsaw known as the Manhattan District and its allied interests and attained an objective which had appeared nebulous to many scientists not so many years back on a large-scale plan.

Upon his shoulders in the most exciting and tingling experiment of its kind ever conducted in this country fell the responsibility of making hairline decisions which could spell success or disaster, the coordination of manufacturing processes and designs, all entirely new; the conciliation and compromising of various scientific, engineering and construction viewpoints and differences, and the guidance of a complex organization which had no territorial limits.

And while some of his decisions in the scientific field admittedly have extended much further than he would have liked, it was his responsibility to make them. Technically, the project is a Corps of Engineers project, but because of it's magnitude and highly scientific ramifications, it was established more or less as a separate entity. Because of the extreme secrecy, it was not possible for the business to be handled in the usual manner, and for that reason it was normal for General Groves to report verbally to his superiors, including the Secretary of War and the Chief of Staff, both of whom took a keen interest in all phases of the development during the three-year period it took to reach the goal.

As part of his manifold duties, General Groves, among other things, supervised the program of the Manhattan District proper, of which Colonel Kenneth D. Nichols is District Engineer with headquarters at Oak Ridge, Tenn.; watched over the details of the securing and processing of the necessary raw materials; supervised the development of the gadget which carried the lethal explosive over Japan; coordinated the activity of the United States and Great Britain in the venture; supervised the maintenance of security of the project; certified the contractors who built and operated the plants; developed labor procurement details, and protected the interests of his Government in all transactions.

In all this--a venture in which the pressure of time was forever

1A

Major General Leslie R. Groves
Directs Vast Project

A soft-spoken Major-General with a flair for the "impossible" emerged today from the shadows of Army-imposed anonymity to be revealed as the driving force behind a $2,000,000,000 "calculated risk" which he directed to successful completion in three years as one of the world's greatest scientific and engineering achievements, the large-scale tapping of the energy within atoms to produce a new weapon of war.

He is 48-year old Leslie Richard Groves, a West Point graduate who stood fourth in his class in 1918 and who has a way about him--a way of getting things done.

His story and activity parallel in interest the history and attainments of the Manhattan Engineer District--the "cover" name given this Government's atomic bomb project--and its allied developments. Actually, he and the Manhattan District are synonomous; he not only selected its name, but for three years weighed his decisions in the face of a suspense and an uncertainty rarely equalled.

Clothed by Secretary of War Henry L. Stimson in an anonymity attuned to the development of the War's best-kept secret, General Groves, as the Officer in Charge of the atomic bomb project, fitted together the multifarious pieces of the vast, country-wide jigsaw known as the Manhattan District and its allied interests and attained an objective which had appeared nebulous to many scientists not so many years back on a large-scale plan.

Upon his shoulders in the most exciting and tingling experiment of its kind ever conducted in this country fell the responsibility of making hairline decisions which could spell success or disaster, the coordination of manufacturing processes and designs, all entirely new; the conciliation and compromising of various scientific, engineering and construction viewpoints and differences, and the guidance of a complex organization which had no territorial limits.

And while some of his decisions in the scientific field admittedly have extended much further than he would have liked, it was his responsibility to make them. Technically, the project is a Corps of Engineers project, but because of it's magnitude and highly scientific ramifications, it was established more or less as a separate entity. Because of the extreme secrecy, it was not possible for the business to be handled in the usual manner, and for that reason it was normal for General Groves to report verbally to his superiors, including the Secretary of War and the Chief of Staff, both of whom took a keen interest in all phases of the development during the three-year period it took to reach the goal.

As part of his manifold duties, General Groves, among other things, supervised the program of the Manhattan District proper, of which Colonel Kenneth D. Nichols is District Engineer with headquarters at Oak Ridge, Tenn.; watched over the details of the securing and processing of the necessary raw materials; supervised the development of the gadget which carried the lethal explosive over Japan; coordinated the activity of the United States and Great Britain in the venture; supervised the maintenance of security of the project; certified the contractors who built and operated the plants; developed labor procurement details, and protected the interests of his Government in all transactions.

In all this--a venture in which the pressure of time was forever a factor--he had at his command the vast funds and resources of the United States, the most brilliant scientific and engineering minds available in this country and the best talent in all lines of endeavor needed for the

1B

success f the project, but it was he who juggled the piec... and fitted them into their proper places.

General Groves explains that "it was the taking of calculated risks which paid off".

As an illustration of that taking of risks and of the suspense and pressure which marked the atomic bomb program from its inception, many millions had been spent on one phase before many persons felt there were any possibilities of Success.

"We knew there were definite and narrow chances throughout the entire program", General Groves declares, "and while we did not know just when success would come, we knew it was worth doing, particularly after our Intelligence learned the Germans were making efforts to solve the problem, how extensive we were unable to learn".

"In our work we have had to junk some of the usual engineering procedures because we were in a field that had never before been explored on so vast a scale. But we made progress through determination and the willingness to take a chance. These chances paid dividends, even though some phases of the program had to be abandoned through necessity."

"All of our development has been marked by 'calculated risks', the taking of chances with wasted effort rather than wasted lives. Furthermore, we knew that no one could guess right all the time and there were no recriminations if certain calculations did not pan out. All concerned worked together as a team and we owe great tribute to the scientists, contractors, and others who worked untiringly and unselfishly day after day in overcoming the numerous handicaps and obstacles in the program. It was an organization job.

"The complexity of the project was such that any decision on one phase could not be made in the majority of the situations without affecting other parts of the work and the closest cooperation was demanded, and had, in all matters. Closest counsel and cooperation was maintained on all major decisions between myself in Washington and Col. Nichols in Tennessee.", General Groves declares.

General Groves was Deputy Chief of Construction under General Thomas M. Robins in the Washington Office of the Chief of Engineers when he was summoned to become associated with the atomic research development in the summer of 1942. As the Deputy Chief, he aided in all military construction in the United States, with expenditures averaging $600,000,000 monthly, a program which included his supervision of the erection of the Pentagon Building across the Potomac from Washington.

Prior to his dip into the waters of nuclear physics, his major previous experience in matters scientific had dealt with research for the Corps of Engineers on anti-aircraft searchlights and allied equipment.

After having given the green light for a large-scale development of the atomic experiment, President Roosevelt took great personal interest in its progress and was constantly advised on major phases of the work, receiving formal reports on the matter at irregular intervals from the Secretary of War and General Groves. After President Roosevelt's, death, the Secretary of War and General Groves brought President Truman up to date on the project at a White House conference. President Roosevelt in a personal letter to General Groves, stressed the tremendous importance of the project and elaborated on his desire that it be developed with the greatest security and secrecy.

and pressure which marked the atomic bomb program from its inception, many millions had been spent on one phase before many persons felt there were any possibilities of Success.

"We knew there were definite and narrow chances throughout the entire program", General Groves declares, "and while we did not know just when success would come, we knew it was worth doing, particularly after our Intelligence learned the Germans were making efforts to solve the problem, how extensive we were unable to learn".

"In our work we have had to junk some of the usual engineering procedures because we were in a field that had never before been explored on so vast a scale. But we made progress through determination and the willingness to take a chance. These chances paid dividends, even though some phases of the program had to be abandoned through necessity."

"All of our development has been marked by 'calculated risks', the taking of chances with wasted effort rather than wasted lives. Furthermore, we knew that no one could guess right all the time and there were no recriminations if certain calculations did not pan out. All concerned worked together as a team and we owe great tribute to the scientists, contractors, and others who worked untiringly and unselfishly day after day in overcoming the numerous handicaps and obstacles in the program. It was an organization job.

"The complexity of the project was such that any decision on one phase could not be made in the majority of the situations without affecting other parts of the work and the closest cooperation was demanded, and had, in all matters. Closest counsel and cooperation was maintained on all major decisions between myself in Washington and Col. Nichols in Tennessee.", General Groves declares.

General Groves was Deputy Chief of Construction under General Thomas M. Robins in the Washington Office of the Chief of Engineers when he was summoned to become associated with the atomic research development in the summer of 1942. As the Deputy Chief, he aided in all military construction in the United States, with expenditures averaging $600,000,000 monthly, a program which included his supervision of the erection of the Pentagon Building across the Potomac from Washington.

Prior to his dip into the waters of nuclear physics, his major previous experience in matters scientific had dealt with research for the Corps of Engineers on anti-aircraft searchlights and allied equipment.

After having given the green light for a large-scale development of the atomic experiment, President Roosevelt took great personal interest in its progress and was constantly advised on major phases of the work, receiving formal reports on the matter at irregular intervals from the Secretary of War and General Groves. After President Roosevelt's, death, the Secretary of War and General Groves brought President Truman up to date on the project at a White House conference. President Roosevelt in a personal letter to General Groves, stressed the tremendous importance of the project and elaborated on his desire that it be developed with the greatest security and secrecy.

Upon the letter is based the security program which made the program the best-kept secret of the war. General Groves personally established and supervised the security policies and so compartmentalized was the construction, operational and production phases of the venture that only a few persons ever knew its full and complete implications and objectives.

General Groves also laid down the general specifications for the selection of areas in Tennessee and Washington for the location, respectively, of the Clinton Engineer Works and the Hanford Engineer Works, and for placing the ultra-secret utilization project at the site it now occupies near Santa Fe in New Mexico.

A plesant-mannered, gracious officer who outwardly never shows the strain and worry of his job, General Groves is a constant source of amazement to his associates and subordinates because of his ability to handle the variety of complex details attendant to the project with a minimum of confusion and the smoothness with which he can treat multitudinous technical and administrative problems during a day's work. Firm and blunt when the occasion demands, but withal considerate and fair-minded, and interested in the welfare of his associates, he has the deep respect and admiration of his staff for his ability to organize and get things done. He has a prodigious memory and often confounds his staff by recalling names, dates and incidents long past buried in files.

General Groves, whenever possible, seeks relaxation from the pressure of his duties and the ardous hours with a brisk turn at tennis, afterwards returning to his office. He plays at the nearby Army and Navy Country Club in Washington. A 12-hour day, shorter on Sundays, is the usual practice with him, and he often remains at work long after his staff has gone home. As Officer in Charge of the project, he has traveled thousands upon thousands of miles throughout the United States in keeping a watchful eye over the development.

Heavy-set, with fine facial features beneath thick, graying black hair, General Groves' theme during the building and operational phases of the project has been "Get it Done" and "Hurry it up". He abhors procrastination and demands that his staff and associates complete their assignments with a minimum of delay.

While bad moments were ofttimes experiences during the past three years as to whether the project would succeed, General Groves during these periods pressed forward with even greater determination to find the answers, in cooperation with scientists and engineers, which would enable his Government to be the first to solve the riddle of an atomic explosive. And the rumor stories which appeared in the newspapers from time to time of the Germans' experiments along the same lines served as an added incentive for success.

General Groves' permanent rank is that of lieutenant-colonel, although he has never served in that rank. This came about when he was jumped from Major to full colonel in 1940 to become special assistant to the quartermaster general in charge of the Army's vast construction program.

General Groves, the son of Leslie R. and Gwen Griffin Groves, was born August 17, 1896 in the manse of the First Presbyterian Church at Albany, N. Y., shortly before his father went into the Army as a chaplain with the 14th Infantry stationed at Vancouver Barracks.

The family remained at Vancouver Barracks while the father was in Cuba with the 8th Infantry, in the Philippines and in China during the Boxer incident with the 14th Infantry. General Groves remembers seeing his father for the first time when as a boy slightly over five he joined him at Fort Snelling near St. Paul.

From there the tours of duty took them to Fort Wayne at Detroit and than to Fort Hancock at Sandy Hook, N. J. Young Groves then returned to Vancouver while his father went to Fort Bayard in New Mexico. After a year at Vancouver, the family moved to Pasadena, California to remain while the father was on sick leave and later while he was stationed at Fort Apache in Arizona. When the father rejoined the 14th Infantry at Fort Harrison, Helena, Montana, the family left Pasadena and joined him.

the strain and worry of his job, General Groves is a constant source of amazement to his associates and subordinates because of his ability to handle the variety of complex details attendant to the project with a minimum of confusion and the smoothness with which he can treat multitudinous technical and administrative problems during a day's work. Firm and blunt when the occasion demands, but withal considerate and fair-minded, and interested in the welfare of his associates, he has the deep respect and admiration of his staff for his ability to organize and get things done. He has a prodigious memory and often confounds his staff by recalling names, dates and incidents long past buried in files.

General Groves, whenever possible, seeks relaxation from the pressure of his duties and the ardous hours with a brisk turn at tennis, afterwards returning to his office. He plays at the nearby Army and Navy Country Club in Washington. A 12-hour day, shorter on Sundays, is the usual practice with him, and he often remains at work long after his staff has gone home. As Officer in Charge of the project, he has traveled thousands upon thousands of miles throughout the United States in keeping a watchful eye over the development.

Heavy-set, with fine facial features beneath thick, graying black hair, General Groves' theme during the building and operational phases of the project has been "Get it Done" and "Hurry it up". He abhors procrastination and demands that his staff and associates complete their assignments with a minimum of delay.

While bad moments were ofttimes experiences during the past three years as to whether the project would succeed, General Groves during these periods pressed forward with even greater determination to find the answers, in cooperation with scientists and engineers, which would enable his Government to be the first to solve the riddle of an atomic explosive. And the rumor stories which appeared in the newspapers from time to time of the Germans' experiments along the same lines served as an added incentive for success.

General Groves' permanent rank is that of lieutenant-colonel, although he has never served in that rank. This came about when he was jumped from Major to full colonel in 1940 to become special assistant to the quartermaster general in charge of the Army's vast construction program.

General Groves, the son of Leslie R. and Gwen Griffin Groves, was born August 17, 1896 in the manse of the First Presbyterian Church at Albany, N. Y., shortly before his father went into the Army as a chaplain with the 14th Infantry stationed at Vancouver Barracks.

The family remained at Vancouver Barracks while the father was in Cuba with the 8th Infantry, in the Philippines and in China during the Boxer incident with the 14th Infantry. General Groves remembers seeing his father for the first time when as a boy slightly over five he joined him at Fort Snelling near St. Paul.

From there the tours of duty took them to Fort Wayne at Detroit and than to Fort Hancock at Sandy Hook, N. J. Young Groves then returned to Vancouver while his father went to Fort Bayard in New Mexico. After a year at Vancouver, the family moved to Pasadena, California to remain while the father was on sick leave and later while he was stationed at Fort Apache in Arizona. When the father rejoined the 14th Infantry at Fort Harrison, Helena, Montana, the family left Pasadena and joined him.

Fort Lawton at Seattle was their next stop. Here, the future general stayed until the summer of 1914 when he entered Massachusetts

Institut. of Technology at Cambridge after a year at the Un..ersity of Washington.

In 1916, he left MIT to enter West Point under a Presidential appointment. After two years there, where he was second-string center on the football team, he was commissioned a second lieutenant on November 1, 1918 and was then assigned to Fort Humphreys (now Fort Belvoir) Virginia, where he attended the Engineers School. With the exception of a trip to Europe in the summer of 1919--shortly after he had been made a first lieutenant--when he toured the World War I battlefields, he remained at Humphreys until June 1920, when he was assigned to Fort Benning, Georgia, where he was with an Engineer Demonstration Company until February 1921, when he returned to Humphreys for four months.

From there, General Groves went to Fort Lewis, Washington, where his work included surveys on Puget Sound. In September 1921, he was assigned to an Engineer Training Company at San Francicso. In November of 1922, he went to Hawaii with the 3rd Engineers and in 1925 was assigned to Galveston Engineer District at Galveston, Texas as assistant to the District Engineer. From there he went to Fort DuPont in Delaware. From November 1927 to April 1928, he was on a tour in Vermont, during which time he narrowly escaped death in a TNT explosion which took the life of his first sergeant.

Nicaragua was his next step. In 1929 he was assigned there for survey work on the proposed Nicaraguan Interoceanic Canal. As commander there of "A" Company of the 1st Engineers, the Corps of Engineers' oldest, he first met Kenneth D. Nichols, now the District Engineer of the Manhattan District, although Colonel Nichols was not in his company. General Groves holds the Nicaraguan Medal of Merit for work done after the Nicaraguan earthquake in 1931.

In July of 1931, General Groves was assigned to the office of the Chief of Engineers in Washington. He served there until 1935, during which time he was in charge of the development and procurement of new equipment for the Engineers, such as power tools and anti-aircraft searchlights and allied equipment. In 1934, he was promoted to Captain.

From 1935 to 1936 he attended the Command and General Staff School at Fort Leavenworth, Kansas and then was assigned as assistant to the Division Chief of the Missouri Engineer Division, during which he assisted in the supervision of the building of Fort Peck Dam. From the Missouri Division, he went to the Army War College, from which he was graduated in 1939. He then went to the General Staff. Shortly afterward, he returned to Nicaragua for three months as a member of a commission to advise the Nicaraguan Government on navigation possibilities of the San Juan River.

After returning to the General Staff in July 1940, when he attained his majority, General Groves became special assistant to the Quartermaster General, aiding in the Army's vast construction program. In November of of 1940, he was jumped in rank to a full colonel to become head of what later was the Operations Branch, Construction Division, Quartermaster Corps. Later he became deputy chief of construction of the Corps of Engineers when the Army's construction program was consolidated under the Engineers in December of 1941.

As deputy chief under General Thomas M. Robins, General Groves aided in supervising all military construction in this country. General Groves was then assigned full-time duty with the Manhattan District and promoted to Brigadier General in September, 1942.

General Groves was married in Seattle, Feb. 10, 1922, to Miss Grace Wilson, daughter of Col. Richard H. Wilson, who served as commanding officer of the 14th Infantry when General Groves' father was the Regiment Chaplain and who was a Captain in the 8th Infantry when his father was with that organization in Cuba.

where he attended the Engineers School. With the exception of a trip to Europe in the summer of 1919--shortly after he had been made a first lieutenant--when he toured the World War I battlefields, he remained at Humphreys until June 1920, when he was assigned to Fort Benning, Georgia, where he was with an Engineer Demonstration Company until February 1921, when he returned to Humphreys for four months.

From there, General Groves went to Fort Lewis, Washington, where his work included surveys on Puget Sound. In September 1921, he was assigned to an Engineer Training Company at San Francicso. In November of 1922, he went to Hawaii with the 3rd Engineers and in 1925 was assigned to Galveston Engineer District at Galveston, Texas as assistant to the District Engineer. From there he went to Fort DuPont in Delaware. From November 1927 to April 1928, he was on a tour in Vermont, during which time he narrowly escaped death in a TNT explosion which took the life of his first sergeant.

Nicaragua was his next step. In 1929 he was assigned there for survey work on the proposed Nicaraguan Interoceanic Canal. As commander there of "A" Company of the 1st Engineers, the Corps of Engineers' oldest, he first met Kenneth D. Nichols, now the District Engineer of the Manhattan District, although Colonel Nichols was not in his company. General Groves holds the Nicaraguan Medal of Merit for work done after the Nicaraguan earthquake in 1931.

In July of 1931, General Groves was assigned to the office of the Chief of Engineers in Washington. He served there until 1935, during which time he was in charge of the development and procurement of new equipment for the Engineers, such as power tools and anti-aircraft searchlights and allied equipment. In 1934, he was promoted to Captain.

From 1935 to 1936 he attended the Command and General Staff School at Fort Leavenworth, Kansas and then was assigned as assistant to the Division Chief of the Missouri Engineer Division, during which he assisted in the supervision of the building of Fort Peck Dam. From the Missouri Division, he went to the Army War College, from which he was graduated in 1939. He then went to the General Staff. Shortly afterward, he returned to Nicaragua for three months as a member of a commission to advise the Nicaraguan Government on navigation possibilities of the San Juan River.

After returning to the General Staff in July 1940, when he attained his majority, General Groves became special assistant to the Quartermaster General, aiding in the Army's vast construction program. In November of of 1940, he was jumped in rank to a full colonel to become head of what later was the Operations Branch, Construction Division, Quartermaster Corps. Later he became deputy chief of construction of the Corps of Engineers when the Army's construction program was consolidated under the Engineers in December of 1941.

As deputy chief under General Thomas M. Robins, General Groves aided in supervising all military construction in this country. General Groves was then assigned full-time duty with the Manhattan District and promoted to Brigadier General in September, 1942.

General Groves was married in Seattle, Feb. 10, 1922, to Miss Grace Wilson, daughter of Col. Richard H. Wilson, who served as commanding officer of the 14th Infantry when General Groves' father was the Regiment Chaplain and who was a Captain in the 8th Infantry when his father was with that organization in Cuba.

General and Mrs. Groves, who live at 3508 36th Street in Washington, have two children, Lt. Richard H. Groves, a West Point graduate in the 1945 class at now attending the Engineers School at Fort Belvoir, and Gwen Groves, 16, a junior at the National Cathedral School for Girls in Washington.

General Groves' permanent residence is Pasadena, California.

WAR DEPARTMENT
WASHINGTON, D.C.

IMMEDIATE RELEASE

Brig. Gen. Thomas F. Farrell
Assistant on Project of
Manhattan Engineer District

The assistant to Major General Leslie R. Groves, the Officer in Charge of this Government's atomic bomb project, is Brig. General Thomas F. Farrell, a 53-year-old, fast-talking, fast-moving hero of five major World War I engagements who joined the Manhattan Engineer District last February 1 after serving as Chief Engineer in charge of construction in the China-Burma-India Theater for 14 months.

Referring to himself as "handy-man for General Groves in relieving his superior of the pressure of many details of the project, General Farrell, when he reported to General Groves as assistant, renewed an association which dates back to 1941 when he was Executive Officer for the latter when both were connected with the construction division of the Quartermaster Corps, and later with the Corps of Engineers.

The responsibility of his present position is reflected in the fact that he would be in a position to take over as Officer in Charge of the project should anything untoward ever happen to General Groves. They never, for instance, travel by plane together.

On July 27, General Farrell left Washington by air for a tiny island in the Pacific to supervise the delivery and care of the destructive "vial of wrath" -- the first time an atomic bomb was ever used -- prior to the time of its launching. There he acted as General Groves' field representative in the operational use of the bomb and coordinated the final use phases of the project's program with the Air Forces, which had trained a special crew to carry the highly technical piece of mechanism over the Japanese target.

Twelve days before, on historic July 16, General Farrell, along with General Groves and the country's top scientists and engineers, had gathered in the desertlands of New Mexico to watch the first successful test of an atomic explosive, a test which climaxed three years of unprecedented effort in an amazing experiment and which showed man he could control the energy within atoms for purposes of warfare. The test successful, he prepared to leave for the Pacific base. A new age, the Atomic Age, had been born.

General Farrell has a spring in his step and a pressing energy. He devotes most of his time to his job, having given up golf several years ago for the duration. He can handle a multitude of problems in a day's time and has the ability to get to the core of a matter quickly. A fast talker who uses expressive language, he also writes brilliantly. His report of the New Mexico test, written for the Secretary of War, was a prose poem which reflected in beautiful and moving language an historic and dramatic event -- an event from which no one knew whether they would return.

He was born Dec. 3, 1891, in Brunswick, N.Y. and was educated in the Troy, N.Y. schools. He finished his high school work at La-Salle Institute in Troy in 1907, and in 1912 was graduated with a degree in Civil Engineering from Rensselaer Polytechnic Institute in Troy.

For nine months in 1912 and 1913, he was with an engineering

1-A

Brig. Gen. Thomas F. Farrell
Assistant on Project of
Manhattan Engineer District

The assistant to Major General Leslie R. Groves, the Officer in Charge of this Government's atomic bomb project, is Brig. General Thomas F. Farrell, a 53-year-old, fast-talking, fast-moving hero of five major World War I engagements who joined the Manhattan Engineer District last February 1 after serving as Chief Engineer in charge of construction in the China-Burma-India Theater for 14 months.

Referring to himself as "handy-man for General Groves in relieving his superior of the pressure of many details of the project, General Farrell, when he reported to General Groves as assistant, renewed an association which dates back to 1941 when he was Executive Officer for the latter when both were connected with the construction division of the Quartermaster Corps, and later with the Corps of Engineers.

The responsibility of his present position is reflected in the fact that he would be in a position to take over as Officer in Charge of the project should anything untoward ever happen to General Groves. They never, for instance, travel by plane together.

On July 27, General Farrell left Washington by air for a tiny island in the Pacific to supervise the delivery and care of the destructive "vial of wrath" -- the first time an atomic bomb was ever used -- prior to the time of its launching. There he acted as General Groves' field representative in the operational use of the bomb and coordinated the final use phases of the project's program with the Air Forces, which had trained a special crew to carry the highly technical piece of mechanism over the Japanese target.

Twelve days before, on historic July 16, General Farrell, along with General Groves and the country's top scientists and engineers, had gathered in the desertlands of New Mexico to watch the first successful test of an atomic explosive, a test which climaxed three years of unprecedented effort in an amazing experiment and which showed man he could control the energy within atoms for purposes of warfare. The test successful, he prepared to leave for the Pacific base. A new age, the Atomic Age, had been born.

General Farrell has a spring in his step and a pressing energy. He devotes most of his time to his job, having given up golf several years ago for the duration. He can handle a multitude of problems in a day's time and has the ability to get to the core of a matter quickly. A fast talker who uses expressive language, he also writes brilliantly. His report of the New Mexico test, written for the Secretary of War, was a prose poem which reflected in beautiful and moving language an historic and dramatic event -- an event from which no one knew whether they would return.

He was born Dec. 3, 1891, in Brunswick, N.Y. and was educated in the Troy, N.Y. schools. He finished his high school work at La-Salle Institute in Troy in 1907, and in 1912 was graduated with a degree in Civil Engineering from Rensselaer Polytechnic Institute in Troy.

For nine months in 1912 and 1913, he was with an engineering party on the New York State Barge Canal and then spent four years in Panama on canal construction. He was commissioned a second lieutenant in the Regular Army with the Corps of Engineers in 1916 at Balboa Heights, Canal Zone.

1-B

Fr 1916 to 1926, he served in the Regular Army. He served brilliantly in World War I, taking part in five major engagements between April 1917 and November 1918 with the 1st Engineers, 1st Division, A.E.F. The engagements in which he participated were the Defensive Sector, Aisne-Marne, Montdidier-Moral, St. Mihiel and Meuse-Argonne.

He served with the Army of Occupation from December 1918 to June 1919. During the war period, he advanced from second lieutenant to major. General Farrell holds the following decorations: Distinguished Service Cross; Silver Star (with two oak leaves); Purple heart; the Croix de Guerre, with Palm and the Legion of Merit, with oak leaf cluster. His service ribbons are Victory (with 5 bronze stars); Occupation of Germany, American Defense, with bronze star; American Theater, European-African Theater and Asiatic Theater.

His service after World War I included tours of duty at Norfolk, Virginia; Camp Dodge, Iowa; Camp Humphreys, Virginia (now Fort Belvoir), where he instructed in engineering at the Engineer School; and the United States Military Academy at West Point, where he was instructor in engineering for two years until his resignation.

In 1926, he resigned from the Regular Army and then on March 8, 1926, was commissioned in the Officers Reserve Corps with the rank of major. From February 1926 to February 1930, he was Commissioner of Canals and Waterways for the State of New York and then served as Chief Engineer of the New York State Department of Public Works until February 1941.

On February 2, 1941 when he returned to active duty with the rank of lieutenant colonel for duty in the construction division of the Quartermaster Corps, he served with General Groves. On Dec. 16, 1941, he was assigned to the Office of the Chief of Engineers. In the latter organization, he served as Division Engineer, Middle Atlantic Division at Baltimore, and then as Chief of Construction Division, Office of the Chief of Engineers, Washington.

On Nov. 16, 1943, he arrived in the China-Burma-India Theater as Chief Engineer, Services of Supply, for that Theater. He was also Commanding General of the Construction Service in the Theater and then Chief Engineer of the Theater. Under his supervision, the Ledo Road, India-Burma pipeline and B-29 bases were built.

Following that service, he joined the Manhattan Engineer District last February 1.

On July 23, 1917, General Farrell married Miss Ynez (correct) White in a ceremony at Washington, D. C. Of their five children, four are living, Thomas Jr., a West Point graduate of 1942 having been killed on the Anzio beachhead in Italy in February 1943 while serving with the Engineers. The other children are Mrs. James Bugden of Albany, N. Y., Peter Buck, now a cadet at West Point; Patricia Anne and Stephen Stuart.

General Farrell was promoted to his present rank on January 17, 1944. He and his family live at 10 Holmes Dale Avenue, in Albany, N.Y.

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

Col. Kenneth D. Nichols
District Engineer For
Manhattan District

Colonel Kenneth David Nichols, a wiry, indefatigable career officer who spends the few idle moments he has in studying military campaigns and the theories and systems of governments, is the District Engineer of the Manhattan Engineer District, the complex, country-wide organization which has played a major part in the development of an atomic explosive.

At 37, he has supervision of the special organization which was set up in the summer of 1942 on order of President Roosevelt to conduct certain research, construction and operational phases of the most amazing engineering and scientific endeavor ever attempted in this country.

Succeeding Brig. Gen. (then Colonel) J. C. Marshall as District Engineer in August, 1943, when the District Offices were moved from New York City to Oak Ridge, Tennessee, site of the 90-square-mile Clinton Engineer Works, Colonel Nichols lives at Clinton Engineer Works and keeps it under his direct personal control. He also supervises the 631-square-mile Hanford Engineer Works near Pasco, Washington, and the carrying on of contract work, wherever it might be, to accomplish the project's objective. He reports directly to Major General Leslie R. Groves in Washington.

The work of the Manhattan District, an organization without territorial limits, includes contracts for construction and operations in all sections of the country and some parts of Canada, with other contracts covering an even wider field. As District Engineer, Colonel Nichols has had supervision of approximately 125,000 persons, directly and under contractors, including construction, operational and supply personnel. Twenty-two University contracts also come under his supervision.

Colonel Nichols is assisted by a large staff of specially selected officers, enlisted men and civilians. Paying tribute to the work they have done, Colonel Nichols declares that "each assistant has spent long hours of work and collectively they have made it possible for the Manhattan District to control the large volume of research, construction and production necessary to complete the project. To their work, and to the work of the contractors engaged, is attributed the successful accomplishment of an 'impossible' task in record time."

He also has praise for the cooperation of the many Government agencies in the work of the project and laudations for the newspapers, particularly those which have had to "live with" the development, for their cooperation on security and aid in other matters.

A former instructor at the United States Military Academy at West Point, from which he was graduated fifth in his class in 1929 after setting a brilliant scholastic pace, Colonel Nichols was the third person to be assigned to what is now known as the Manhattan District. The first was Brig. Gen. Marshall, who was originally assigned as District Engineer, and the second, Miss Virginia Olsson, of Calais, Maine, General Marshall's secretary, and now holding the

District Engineer For
Manhattan District

Colonel Kenneth David Nichols, a wiry, indefatigable career officer who spends the few idle moments he has in studying military campaigns and the theories and systems of governments, is the District Engineer of the Manhattan Engineer District, the complex, country-wide organization which has played a major part in the development of an atomic explosive.

At 37, he has supervision of the special organization which was set up in the summer of 1942 on order of President Roosevelt to conduct certain research, construction and operational phases of the most amazing engineering and scientific endeavor ever attempted in this country.

Succeeding Brig. Gen. (then Colonel) J. C. Marshall as District Engineer in August, 1943, when the District Offices were moved from New York City to Oak Ridge, Tennessee, site of the 90-square-mile Clinton Engineer Works, Colonel Nichols lives at Clinton Engineer Works and keeps it under his direct personal control. He also supervises the 631-square-mile Hanford Engineer Works near Pasco, Washington, and the carrying on of contract work, wherever it might be, to accomplish the project's objective. He reports directly to Major General Leslie R. Groves in Washington.

The work of the Manhattan District, an organization without territorial limits, includes contracts for construction and operations in all sections of the country and some parts of Canada, with other contracts covering an even wider field. As District Engineer, Colonel Nichols has had supervision of approximately 125,000 persons, directly and under contractors, including construction, operational and supply personnel. Twenty-two University contracts also come under his supervision.

Colonel Nichols is assisted by a large staff of specially selected officers, enlisted men and civilians. Paying tribute to the work they have done, Colonel Nichols declares that "each assistant has spent long hours of work and collectively they have made it possible for the Manhattan District to control the large volume of research, construction and production necessary to complete the project. To their work, and to the work of the contractors engaged, is attributed the successful accomplishment of an 'impossible' task in record time."

He also has praise for the cooperation of the many Government agencies in the work of the project and laudations for the newspapers, particularly those which have had to "live with" the development, for their cooperation on security and aid in other matters.

A former instructor at the United States Military Academy at West Point, from which he was graduated fifth in his class in 1929 after setting a brilliant scholastic pace, Colonel Nichols was the third person to be assigned to what is now known as the Manhattan District. The first was Brig. Gen. Marshall, who was originally assigned as District Engineer, and the second, Miss Virginia Olsson, of Calais, Maine, General Marshall's secretary, and now holding the same position with Colonel Nichols.

1-B

As(puty District Engineer until August, 1943, when] succeeded B ig. General Marshall, Colonel Nichols paid particular attention to the scientific phases of the development; the supply of raw materials, the activity of Clinton Laboratories, which is the pilot plant at Oak Ridge for the Hanford Engineer Works; and research in cooperation with the leading scientists, engineers and manufacturers in the country. One of his most interesting jobs outside of scientific aspects was the supervision of the building of the bustling town of Oak Ridge, which was constructed "from the ground up" in a sparsely-settled farming country 18 miles west of Knoxville, and which now has a population of 75,000, making it the fifth largest city in Tennessee.

Colonel Nichols brought to the job a background which included special studies in hydraulic engineering in this country and Germany; tours of duty at the U. S. Waterways Experiment Station at Vicksburg, Miss., canal survey work in Nicaragua and Army construction work. In 1937, he received his Ph.D. in Experimental Hydraulics from the State University of Iowa.

Colonel Nichols tempers his ability for organization with a special interest in the personalities involved. He is modest, friendly and self-effacing, and a champion of man's personal rights who dislikes to see people pushed around. Dynamic and driving in a manner belying his appearance, he sets a fast pace for his subordinates and pursues an objective with a tenacity which does not flag until all resources and avenues have been exhausted.

He relaxes from his duties with an occasional game of badminton at his Oak Ridge home and has the faculty of "taking off his overalls" completely when he leaves the job. As one officer describes him, one of the secrets of his energy during the day is his ability to forget the job when he leaves it.

Colonel Nichols was born in Cleveland, Ohio, Nov. 13, 1907, the son of Wilbur L. Nichols, a construction contractor, and May Nichols. Educated in the Cleveland public schools, he was graduated at the age of 16 from the John Marshall High School there in 1924.

He entered West Point Military Academy July 1, 1925, under an appointment from Representative Theodore E. Burton (now deceased) of the 22nd Ohio Congressional District and was graduated fifth in his class of 1929. His classmates included General Frank D. Merrill, the leader of the famous Merrill's Marauders; General James M. Gavin of the Paratroopers; Brig. Gen. George A. Lincoln, Brig. Gen. Walter K. Wilson, Jr., and Colonel Paul W. Thompson, the brilliant Engineer who was wounded on D-Day.

Colonel Nichols reported to Fort Humphreys (now Fort Belvoir) Virginia, September 13, 1929, as a second lieutenant and in October of that year was assigned to the U. S. Army Engineer Battalion in Nicaragua for survey work on the proposed Nicaraguan Interoceanic Canal. While there, he was awarded the Nicaraguan Medal of Merit for work done after the Managua earthquake in March, 1931.

He attended Cornell University from July 1931 to June 1932 when he received a degree in Civil Engineering. From June 1932 to August 1932, he was stationed at the U. S. Waterways Experiment Station at Vicksburg, Miss., which he left in September 1932 to return to Cornell, where he received a degree as Master of Civil Engineering in June of 1933. From July 1933 to August 1934 he was assistant director of the Waterways Experiment Station at Vicksburg.

In September 1934 Colonel Nichols left Vicksburg to study hydraulic research methods in Europe under assignment of the War Department. In that capacity, he attended the Technische Hochschule, town of Oak Ridge, which was constructed "from the ground up" in a sparsely-settled farming country 18 miles west of Knoxville, and which now has a population of 75,000, making it the fifth largest city in Tennessee.

Colonel Nichols brought to the job a background which included special studies in hydraulic engineering in this country and Germany; tours of duty at the U. S. Waterways Experiment Station at Vicksburg, Miss., canal survey work in Nicaragua and Army construction work. In 1937, he received his Ph.D. in Experimental Hydraulics from the State University of Iowa.

Colonel Nichols tempers his ability for organization with a special interest in the personalities involved. He is modest, friendly and self-effacing, and a champion of man's personal rights who dislikes to see people pushed around. Dynamic and driving in a manner belying his appearance, he sets a fast pace for his subordinates and pursues an objective with a tenacity which does not flag until all resources and avenues have been exhausted.

He relaxes from his duties with an occasional game of badminton at his Oak Ridge home and has the faculty of "taking off his overalls" completely when he leaves the job. As one officer describes him, one of the secrets of his energy during the day is his ability to forget the job when he leaves it.

Colonel Nichols was born in Cleveland, Ohio, Nov. 13, 1907, the son of Wilbur L. Nichols, a construction contractor, and May Nichols. Educated in the Cleveland public schools, he was graduated at the age of 16 from the John Marshall High School there in 1924.

He entered West Point Military Academy July 1, 1925, under an appointment from Representative Theodore E. Burton (now deceased) of the 22nd Ohio Congressional District and was graduated fifth in his class of 1929. His classmates included General Frank D. Merrill, the leader of the famous Merrill's Marauders; General James M. Gavin of the Paratroopers; Brig. Gen. George A. Lincoln, Brig. Gen. Walter K. Wilson, Jr., and Colonel Paul W. Thompson, the brilliant Engineer who was wounded on D-Day.

Colonel Nichols reported to Fort Humphreys (now Fort Belvoir) Virginia, September 13, 1929, as a second lieutenant and in October of that year was assigned to the U. S. Army Engineer Battalion in Nicaragua for survey work on the proposed Nicaraguan Interoceanic Canal. While there, he was awarded the Nicaraguan Medal of Merit for work done after the Managua earthquake in March, 1931.

He attended Cornell University from July 1931 to June 1932 when he received a degree in Civil Engineering. From June 1932 to August 1932, he was stationed at the U. S. Waterways Experiment Station at Vicksburg, Miss., which he left in September 1932 to return to Cornell, where he received a degree as Master of Civil Engineering in June of 1933. From July 1933 to August 1934 he was assistant director of the Waterways Experiment Station at Vicksburg.

In September 1934 Colonel Nichols left Vicksburg to study hydraulic research methods in Europe under assignment of the War Department. In that capacity, he attended the Technische Hochschule, Charlottenburg, Berlin, Germany, under a fellowship of the Institute of International Education. Meanwhile, in October 1934, he had received promotion to first lieutenant.

Co[illegible]el Nichols returned to the Waterways Station in V[illegible]ksburg in September 1935 where he remained until June 1936. His work there was concentrated on the development of procedures for assisting in the design of hydraulic structures and the control of the turbulent Mississippi River by means of hydraulic models.

From June 1936 to August 1936, he attended the State University of Iowa at Iowa City. From September 1936 to June 1937 he attended the Engineer School at Fort Belvoir and during the spring of 1937 was on a short tour of duty at Louisville, Ky., in connection with relief work during the Ohio River Flood. During the summer of 1937, he returned to the State University of Iowa to receive his Ph.D. in Experimental Hydraulics.

From September 1937 to June 1941, Colonel Nichols served as an instructor in the Department of Civil and Military Engineering at the Military Academy at West Point. He was made a captain in June of 1939, the summer he made a tour of Europe and saw first-hand evidence of the pending world-wide conflict which Adolph Hitler was brewing.

After leaving the Academy, he served until May 1942 as Area Engineer in charge of construction at the Rome Air Depot at Rome, N. Y. In October, 1941, he received his majority. From February 1942 to June 1942 -- he was made a lieutenant colonel in February 1942 -- he was Area Engineer in charge of construction at the Pennsylvania Ordnance Works at Williamsport, leaving there to become associated with the Manhattan Engineer District. Colonel Nichols was scheduled to go with troops in July 1942 but the Manhattan Post cancelled that assignment. He became a full colonel in May 1943. His permanent rank is that of captain.

On December 15, 1932, Colonel Nichols was wed to Miss Jacqueline Darrieulat, daughter of Francois and Marie Louis Darrieulat of Washington, D. C. They have two children, Jacqueline Ann and K. David.

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

Col. Franklin T. Matthias Heads Project Unit

Franklin T. Matthias, the Commanding Officer of the 631-square-mile Hanford Engineer Works, is a 37-year-old Colonel whose accomplishments in the construction and operations of a vital unit of the Government's Atomic Bomb Project have loomed as large as the area over which he has jurisdiction.

As Area Engineer of the Hanford phase of the Manhattan Engineer District in the development of an atomic explosive, Colonel Matthias was among those instrumental in bringing to reality a program which has held the role of the war's top secret. In this capacity, he worked under the direction of Major General Leslie R. Groves, the Officer in charge of the entire atomic Bomb development, in Washington, and under Colonel K. D. Nichols, District Engineer of the Manhattan Engineer District with headquarters at Oak Ridge, Tennessee.

Assigned to the Hanford project at the very inception of the unprecedented endeavor which this Government began in the summer of 1942, Colonel Matthias selected the site for the work in accordance with the general specifications laid down by General Groves and then worked under the highest pressure in directing to successful completion one phase of a program which challenged the imagination and skill of the country's leading scientists and engineers.

Under his direction came the hunt for manpower, the building of the camps, houses and facilities necessary to care for the workers who reached 45,000 at the peak of construction activity. Highways, 386 miles of them, and many miles of railroad were built for the transportation of workmen, materials, supplies and equipment. There followed the actual construction of the plant areas, buildings whose designs and features were totally different from any engineering program ever before conceived.

With the people came problems in a new settlement which totaled 80,000 including the families of workmen, and these problems in the midst of an isolated location were successfully handled by the native of Wisconsin who likes to be called "Fritz" and who has the highest regard of all those under him, from scientist to laborer.

Colonel Matthias, who now controls the model village of Richland, a town of 15,000 which houses the operational employees of the project, recalls the era of Hanford, now a "ghost" construction town, with high praise for the cooperation he received in his unprecedented job from such Government agencies as the War Manpower Commission, the Public Roads Administration, the Office of Price Administration and the Federal Works Agency, and has further praise for the Quartermaster Corps, Ordnance, the Transportation Corps, the Signal Corps, the Air Forces, various divisions of the Corps of Engineers, and the Commanding General of the Ninth Service Command.

He gives labor great credit, lauds his staff, praises the neighboring towns for their assistance on housing and other problems, hails the newspapers and radio stations for their security observance and lauds the aid given by public officials. The know-how of the du Pont Company in the construction and operations also elicits the greatest praise from the Colonel.

1-A

Colonel Matthias was born in Glidden

Col. Franklin T. Matthias
Heads Project Unit

Franklin T. Matthias, the Commanding Officer of the 631-square-mile Hanford Engineer Works, is a 37-year-old Colonel whose accomplishments in the construction and operations of a vital unit of the Government's Atomic Bomb Project have loomed as large as the area over which he has jurisdiction.

As Area Engineer of the Hanford phase of the Manhattan Engineer District in the development of an atomic explosive, Colonel Matthias was among those instrumental in bringing to reality a program which has held the role of the war's top secret. In this capacity, he worked under the direction of Major General Leslie R. Groves, the Officer in charge of the entire atomic Bomb development, in Washington, and under Colonel K. D. Nichols, District Engineer of the Manhattan Engineer District with headquarters at Oak Ridge, Tennessee.

Assigned to the Hanford project at the very inception of the unprecedented endeavor which this Government began in the summer of 1942, Colonel Matthias selected the site for the work in accordance with the general specifications laid down by General Groves and then worked under the highest pressure in directing to successful completion one phase of a program which challenged the imagination and skill of the country's leading scientists and engineers.

Under his direction came the hunt for manpower, the building of the camps, houses and facilities necessary to care for the workers who reached 45,000 at the peak of construction activity. Highways, 386 miles of them, and many miles of railroad were built for the transportation of workmen, materials, supplies and equipment. There followed the actual construction of the plant areas, buildings whose designs and features were totally different from any engineering program ever before conceived.

With the people came problems in a new settlement which totaled 80,000 including the families of workmen, and these problems in the midst of an isolated location were successfully handled by the native of Wisconsin who likes to be called "Fritz" and who has the highest regard of all those under him, from scientist to laborer.

Colonel Matthias, who now controls the model village of Richland, a town of 15,000 which houses the operational employees of the project, recalls the era of Hanford, now a "ghost" construction town, with high praise for the cooperation he received in his unprecedented job from such Government agencies as the War Manpower Commission, the Public Roads Administration, the Office of Price Administration and the Federal Works Agency, and has further praise for the Quartermaster Corps, Ordnance, the Transportation Corps, the Signal Corps, the Air Forces, various divisions of the Corps of Engineers, and the Commanding General of the Ninth Service Command.

He gives labor great credit, lauds his staff, praises the neighboring towns for their assistance on housing and other problems, hails the newspapers and radio stations for their security observance and lauds the aid given by public officials. The know-how of the du Pont Company in the construction and operations also elicits the greatest praise from the Colonel.

Colonel Matthias was born in Glidden, Wisconsin, March 13, 1908. His parents, Mr. and Mrs. (Cristina Thompson) F. H. Matthias now reside at Curtiss, Wisconsin.

His capacity for handling a varied line of activities dates back to his school days. While attending Abbotsford, Wisconsin High School, he won the American Legion Medal for all-around athletic and scholastic ability. While attending the University of Wisconsin, a typical school year for Colonel Matthias was to be editor of the Wisconsin Engineer Magazine, President of the student Y.M.C.A., a committee member of the University Religious Conference, and secretary-treasurer of Polygon, a college of engineering function.

At the end of his senior year he was picked by a group of faculty members to receive the much sought after Kenneth Sterling Day Award, the winner of which is judged on his outstanding and all-around athletic and scholastic ability and character. He was graduated in 1930 from the College of Engineering at Wisconsin and remained with the University as a member of its faculty. As a faculty member he instructed in Surveying and Hydraulics, besides continuing his studies for master degrees and editing The Transit, a publication of Chi Epsilon, a national honorary civil engineering fraternity.

In 1935, he left the University of Wisconsin faculty to go with the Tennessee Valley Authority as construction engineer. In 1939 he was in charge of engineering work on a rock dredging and bank protection project on the Tennessee River near Pickwick Dam, Tennessee. From late 1940, until he went into active Army Service, Colonel Matthias was with the Dravo Corporation of Pittsburgh, handling the planning and design of the construction plant for a 12-mile section of the Delaware Aqueduct.

The Colonel has had practically 21 years of military connection. He was a member of the Wisconsin National Guard from September, 1942 until June, 1930, when following graduation from the R.O.T.C., he was given an honorable discharge as sergeant to accept a Second Lieutenant's commission in the Reserve Corps. He remained active in the reserve until he entered active service on April 15, 1941, as a first lieutenant.

Before being assigned to Hanford, Colonel Matthias served six months under General Groves in the Office of the Chief of Engineers on the construction phase of the Pentagon Building. The remainder of the time he was Chief of the Planning and Authorization Unit of the Ports and Supply Depots Section in the Construction Division of the Corps of Engineers.

Colonel Matthias has three brothers, all of whom were in the same unit of the Wisconsin National Guard at Abbotsford, Wisconsin. One brother received an appointment to West Point from the Guard. He is Colonel Norman A. Matthias, stationed in the European Theater with the Corps of Engineers. Another brother was a civil engineer in civilian life and is now Captain Carl D. Matthias with the Corps of Engineers in Cairo. A third brother, Harold E. Matthias, has remained a member of various school faculties. During the war, he has been serving as instructor for the Army Signal Corps.

Soon after college graduation, the Colonel married a college sweetheart, Reva Baumgarten, also a product of Wisconsin, the daughter of Mr. and Mrs. A. E. Baumgarten of Elroy, Wisconsin.

The Colonel holds a B. S., M. S. AND C. E. from the University of Wisconsin. He is a Registered Professional Engineer in the state of Wisconsin, a member of the Sigma Phi Epsilon Fraternity; Chi Epsilon, honorary civil engineer fraternity; Tau Beta Pi, honorary engineering fraternity; Phi Kappa Phi, Senior honorary fraternity; Scabbard and Blade, ROTC military honorary society; National Society of Professional Engineers and an associate member of the American Society of Civil Engineers.

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

Colonel Stafford L. Warren
Heads Medical Service

Colonel Stafford L. Warren, professor of the Medical and Dentistry School at the University of Rochester, Rochester, New York, is Chief of Medical Services, Manhattan Engineer District.

To Colonel Warren goes much credit for the remarkable plant safety record of the Manhattan projects. The Colonel is a tremendously vital man of unusual personal charm and executive ability who has gained the great respect not only of his co-workers but of every one with whom he has come in contact. He is a big man of splendid carriage gained from football, baseball and fencing and a love for salmon fishing, hunting and tennis.

Associated with Colonel Warren are Lt. Colonel H. L. Friedell of Chicago, Illinois, Executive Officer of Medical Services and Chief of the Research Branch, Lt. Colonel Charles E. Rea of St. Paul, Minnesota Chief of Clinical Services, and Captain Fred A. Bryant of Rochester, New York, Chief of the Industrial Branch.

Colonel Warren married Viola Lockhart and they have three children Jane, now Mrs. Fred Uffleman of Oak Ridge, Tennessee, Dean, who is in t Navy, and Roger, a student of physics at the University of Rochester, Rochester, New York.

Colonel Warren was born in Maxwell, New Mexico June 21 1896. He received his AB, MA and MD at the University of California, Berkeley, California and did post-graduate work at Johns Hopkins and Harvard Universities. In 1925 he toured Europe as a Rockefeller Foundation travelling student. He went to the University of Rochester in 1926.

His permanent residence is Rochester, New York.

WAR DEPARTMENT
WASHINGTON, D. C.

This information is for release in connection with the story on the Atomic Bomb Project.

A statement by Major General Leslie R. Groves, the Officer in Charge of this Government's Atomic Bomb Project:

Besides the military personnel who have been mentioned in other releases, I wish to bring special notice to the following whose services have been of particular value to the work of the Manhattan Engineer District Project:

NAME	RANK	HOME	OCCUPATION OR EMPLOYER
		ALABAMA	
HODGSON, John S.	Lt. Col.	Montgomery	Civil Engineer
WILLIAMS, Walter J.	Lt. Col.	Spauling	Civil Engineer
		COLORADO	
BENBOW, Horace S.	Major	Colorado Springs	Contractor
		CONNECTICUT	
MARSDEN, Earl H.	Col.	New Haven	Civil Engineer
VANCE, John E.	Major	New Haven	Chemist
		DELAWARE	
GREAGOR, Oswald H.	Major	Wilmington	Chemist
		DISTRICT OF COLUMBIA	
DERRY, John A.	Major	Washington	Electrical Engineer
JOHNSON, Allan C.	Lt. Col.	Washington	Architectural Engineer
KIRKPATRICK, E. E.	Col.	Washington	Civil Engineer, U.S. Army
PIERCE, Claude C.	Major	Washington	Attorney
		ILLINOIS	
KADLEC, Harry R. (deceased)	Lt. Col.	Chicago	Civil Engineer
SCHEIDENHELM, Arlene G.	Capt.	Mendota	Owens-Illinois Glass Co.

NAME	RANK	HOME	OCCUPATION OR EMPLOYER
		INDIANA	
KELLY, Wilbur E., Jr.	Major	New Albany	Civil Engineer
		MASSACHUSETTS	
FIDLER, Harold A.	Major	Cambridge	Civil Engineer
		MICHIGAN	
COOK, Richard W.	Lt. Col.	Muskegon	Civil Engineer
		MINNESOTA	
MERRITT, Philip L.	Major	Duluth	Geologist
		MISSISSIPPI	
ROBINSON, George O.	2nd Lt.	Tunica	Newspaperman
		MISSOURI	
RUHOFF, John R.	Lt. Col.	St. Louis	Chemist
		NEBRASKA	
NELSON, Curtis A.	Lt. Col.	Bristow	Civil Engineer
		NEW JERSEY	
CONSODINE, William A.	Lt. Col.	Newark	Attorney
FURMAN, Robert R.	Major	Trenton	Civil Engineer
VANDEN BULCK, Charles	Lt. Col.	Lincoln Park	Auditor, U.S. Engineers
VOLPE, Joseph	2nd Lt.	Cedar Grove	Attorney
		NEW MEXICO	
PARSONS, William S.	Captain (USN)	Fort Sumner	Ordnance Engineer, USN
		NEW YORK	
LEVINE, Murray S.	C.W.O.	Brooklyn	Attorney
MURPHY, Edgar J.	Major	New York	Physicist
PETERSON, Arthur V.	Lt. Col.	New York	Civil Engineer
SALLY, Joseph F.	Major	Malverne	Civil Engineer
SMITH, Francis J.	Major	New York	Attorney
TRAYNOR, Harry S.	Major	Syracuse	Mechanical Engineer

NAME	RANK	HOME	OCCUPATION OR EMPLOYER
		OHIO	
DURKIN, Edmund J.	2nd Lt.	Cleveland	Lawyer
FOX, Mark C.	Lt. Col.	Brookville	Civil Engineer
LANSDALE, John, Jr.	Col.	Cleveland	Attorney
		OKLAHOMA	
CALVERT, Horace K.	Major	Oklahoma City	Pure Oil Co.
		PENNSYLVANIA	
ANTES, Donald E.	Col.	Coatesville	Construction Engineer
TYLER, Gerald R.	Col.	Philadelphia	Pennsylvania Department of Highways
		RHODE ISLAND	
TAMMARO, Alfonso	Lt. Col.	Providence	Construction Engineer
		TEXAS	
CORNELIUS, William P.	Lt. Col.	Ennis	Civil Engineer
GUARIN, Paul L.	Lt. Col.	Houston	Mechanical Engineer
		WASHINGTON	
PARSONS, W. B.	Lt. Col.	Seattle	Pacific Waxed Paper Co.

25-76782-35

HEADQUARTERS
MANHATTAN ENGINEER DISTRICT
OAK RIDGE, TENNESSEE

This release is prepared as background information for use in connection with the story on the Atomic Bomb Project.

OAK RIDGE, Tenn. Col. Kenneth D. Nichols, District Engineer of e Manhattan Engineer District, today paid tribute to the hundreds of ganizations and thousands of persons whose coordinated efforts have de possible the utilization of atomic power within the time span of is war for use in bombs against Japan.

Explaining that the progress of fundamental research in physics and emistry prior to the war indicated that utilization of atomic power might ve been feasible in 15 to 20 years, Colonel Nichols declared that the mbined effort of the many different people and organizations connected th the project has compressed the time to three years, an accomplishment ich will endure as a monument to the ingenuity and vision and determina-on of all those, from scientists to laborers, who have had a part in the rk.

"These people and organizations--scientific, engineering, contracting, nufacturing, procuring and others--working in harmony among themselves and th Government agencies deserve unlimited credit for the successful accom-ishment of an almost impossibly vast and complicated task,"Colonel Nichols clared.

In addition, he pointed out that the District's staff of specially lected officers, WACs, enlisted men, and civilians deserve a large measure of edit for the success of the Army's part in the project. Paying tribute the work they have done, Colonel Nichols declared that "each assistant s spent long hours of work each day and collectively have made it possible r the Manhattan District to control the large volume of research, con-ruction, and production necessary to complete the project."

Colonel Nichols said it would be impossible to list at this time the veral hundred names of military and civilian personnel assigned to the nhattan District, but added that he wished to mention a few of those who ave made exemplary contributions to the success of the project."

Among these, he said, are:

Col. E. H. Marsden, of New Haven, Conn., Executive Officer for the strict; Col. F. T. Matthias, of Curtis, Wisconsin, Area Engineer for the nford Engineer Works at Richland, Wash.; Col. G. R. Tyler, of Philadelphia, ., Area Engineer at Santa Fe; and Col. S. L. Warren, of Rochester, N. Y., ief of the Medical Section, who was formerly Professor, School of Medicine d Dentistry, University of Rochester.

In addition, Colonel Nichols said, there are:

Lt. Col. R. W. Cook of Muskegon, Mich., Operations Officer for one
? the production areas; Lt. Col. W. P. Cornelius of Ennis, Texas, Constru-
.on Officer on one of the production plants; Lt. Col. M. C. Fox, of
rooksville, Ohio, Construction Officer on one of the production plants;
:. Col. H. L. Friedell of Minneapolis, Minn., Executive Officer of the
edical Section;

Lt. Col. P. L. Guarin, of Houston, Texas, Area Engineer in one of the
ew York Areas; Lt. Col. J. S. Hodgson, of Montgomery, Ala., Construction
'ficer on one of the production plants and now Chief of the Facilities and
ervice Division of the Clinton Engineer Works; Lt. Col. A. C. Johnson, of
rooklyn, N. Y., who, as liaison officer in Washington, D. C., is in charge
' procurement for the District;

Lt. Col. H. R. Kadlec, now deceased, of Chicago, who was Chief of Con-
.ruction at the Hanford Engineer Works; Lt. Col. R. W. Lockridge, of Hyatts-
.lle, Maryland, technical assistant to the Area Engineer at Santa Fe; Lt.
l. C. A. Nelson, of Pine Bluff, Ark., Director of Personnel for the District;

Lt. Col. W. B. Parsons, of Seattle, Wash., Chief of the Security Div-
ion of the District; Lt. Col. A. V. Peterson, of Brooklyn, N. Y., former
ea Engineer on the research and development of the Hanford Project and now
iief of the Production and Combined Operations Section of the District; Lt.
l. C. E. Rea, of St. Paul, Minn., the head of the Oak Ridge, Tenn., hospital;

Lt. Col. B. T. Rogers, of Eau Claire, Wis., Chief of Construction and
puty Area Engineer at Hanford Engineer Works; Lt. Col. J. R. Ruhoff, of
. Louis, Mo., who participated in the early scientific developments for the
nufacture of basic materials and became Area Engineer for the supply of
.ch materials and who now is in charge of the operation of one of the pro-
.ction plants; Lt. Col. S. L. Stewart of Bisbee, Ariz., Area Engineer for
ocurement at Santa Fe;

Lt. Col. J. C. Stowers, of Natchez, Miss., Area Engineer on the design
one of the production plants; Lt. Col. A. Tammaro, of Providence, R. I.,
o was Area Engineer on the manufacture of certain materials for one of the
oduction plants and now Chief of the Contracts and Claims Branch of the
ministrative Division;

Lt. Col. C. Vanden Bulck, of Lincoln, Park, N. J., Chief of the Admin-
trative Division of the District; Lt. Col. W. J. Williams, of Spaulding,
a., who was construction officer in charge of one of the production plants
d now is Officer in Charge of the construction and operation of one of the
oduction plants; Major J. O. Ackerman, of Hastings, Minn., Technical Officer
some of the operations at Santa Fe;

Major E. J. Bloch, of St. Louis, who was Unit Chief on coordinating the
sign, construction and administration of the town of Oak Ridge; Major T. J.
ans, of Florence, Ala., Unit Chief on construction and operation of one of
e production plants; Major J. L. Ferry, of Whiting, Ind., head of the in-
ustrial division of the medical section; Major H. A. Fidler, of Cambridge,

ass., Area Engineer on the research and development for one of the pro-
uction processes;

Major O. H. Greager, of Wilmington, Del., who was research division ead at the Clinton Laboratories at Oak Ridge with full responsibility for he development of one of the main processes to be used on the Hanford roject, and who is now assigned on other technical work; Lt. Commander . M. Keiller, USNR, of Houston, Texas, who was in charge of naval personel serving in a technical capacity at Clinton Engineer Works; Major W. E. elley, of New Albany, Ind., who was unit chief on one of the production lants during design, construction and initial and initial operations and who s now Area Engineer on the procurement of certain basic materials.

Major E. J. Murphy, of New York City, who was operations officer of the linton Laboratories and related research and experimental work; Major G. W. ussell, of Teaneck, New Jersey, who assisted in the procurement and manuacture of certain fasic materials and who is now assistant to the Officer in harge of one of the production plants; Major J. F. Sally, of Malverne, Long sland, who was Area Engineer on the design and construction of one highly pecialized phase of operation;

Major W. T. St. Clair, of Nashville, Tenn., assistant to the construction fficer on one of the production plants; Major W. O. Swanson of Jamestown, . Y., Area Engineer on the design of one of the production plants and also hief of the Utilities and Maintenance Branch at the Clinton Engineer Works; ajor H. S. Traynor of Syracuse, N. Y., Production Officer on one technical hase of the project and also chief of the Historical Section; Major J. E. ance, of New Haven, Conn., Executive and Technical Officer on the procureent of basic materials;

Capt. S. S. Baxter, of Philadelphia, Pa., Area Engineer on medical and cientific research at the University of Rochester; Capt. J. H. King of nniston, Ala., who was area engineer on one production phase and now assistnt Capt. A. G. Scheidenhelm, of Mendota, Ill., Commanding Officer of WAC ersonnel assigned to the District; Capt. B. G. Seitz, of Buffalo, N. Y., tatistics officer; Lt. J. J. Flaherty (JG) USNR, of Battle Creek, Mich., eputy chief of the personnel division and Chief Warrant Officer M. S. evine of Brooklyn, N. Y., who supervises the administration of selective ervice deferments.

Colonel Nichols said that civilian personnel with the District who have ade outstanding contributions are:

J. C. Clarke of Philadelphia, Pa., assistant to the chief of the Adminitrative Division; J. G. LeSieur of Lilbourne, Missouri; chief of the general lministrative branch of the Administrative Division; J. R. Maddy, of Enid, la., chief of the safety and accident prevention branch of the District; . A. Wende, of Buffalo, N. Y., chief of the engineering section of the Central cilities Division at the Clinton Engineer Works and Dr. H. T. Wensel of Washgton, D. C., technical advisor to the District Engineer on research under le supervision of the District.

This partial list does not include the scientific, manufacturing and ntracting personnel outside Colonel Nichols' own organization. He conned this first mention to personnel on his own staff who have made real ntributions in their particular field.

P. 1 missing

WAR DEPARTMENT
WASHINGTON, D.C.

IMMEDIATE RELEASE

Dr. James B. Conant
"Statesman of Science"

James Bryant Conant, President of Harvard University since 1933, has been frequently called the "real statesman of science," and his association with the Manhattan Engineer District has more than once demanded from him all the qualifications that have earned him this praise.

Dr. Conant, a leader in organic chemistry, has, during the entire planning, development, and production eras of the District, proven himself an indefatigable "anthing and everything for the project no matter what its personal inconvenience."

To Major General L. R. Groves, Dr. Conant gave sound advice and strong support in those trying moments when others were cautioning delay and arguing against going ahead with construction until proof as to feasibility had been obtained. This was particularly true with both of the major plants at Oak Ridge, Tennessee. This helpful support prompted General Groves to remark, "Dr. Conant has the gambling spirit of the New England pioneers -- a calculated gambling spirit."

During the formative periods of this breath-taking scientific project, there were naturally moments of deep concern of failure. In these dark moments, Dr. Conant proved himself to be the unselfish and truly great "statesman of science" to all his co-workers. He gave the impression that he would carry far more than his own part in any failure of the project--if failure it were.

Dr. Conant served on the General Policy Group of the project, along with former Vice President Henry A. Wallace, Secretary of War Henry L. Stimson, and Dr. Vannevar Bush. He also was a member of the Military Policy Committee as alternate to Dr. Bush, and a member of the Combined Policy Committee. When the Interim Committee was established to recommend the future national policy, Dr. Conant was again drafted as a member.

Dr. Conant was born in Dorchester, Massachusetts, March 26, 1893, the son of James Scott and Jennett (Orr) Conant. He received his AB at Harvard University in 1913 and his Ph. D. at the same University in 1916. Degrees in Law and the Sciences have been awarded him by many leading universities in America, as well as degrees from Oxford and Cambridge Universities in England.

On April 17, 1921, Dr. Conant married Grace Thayer Richards, the daughter of Theodore Richards, a Nobel prize winner. They have two sons, James Richards Conant and Theodore Richards Conant.

Dr. Conant served in the last World War, reaching the grade of Major in the Chemical Warfare Service in 1918.

Dr. Conant is an authority on organic chemistry, reduction and oxidation, hemoglobin, free radicals, quantitative study of organic reactions, super-acid solutions and chlorophyl and, despite his protestation to the contrary, on atomic energy.

Dr. Conant is a chairman member of the National Defense Research Committee.

He is a man of a trim figure giving the appearance of keeping himself in fine physical condition, even in these time-consuming war days. He is a mountain climber of some renown.

He lives with his family in Cambridge, Massachusetts.

James Bryant Conant, President of Harvard University since 1933, has been frequently called the "real statesman of science," and his association with the Manhattan Engineer District has more than once demanded from him all the qualifications that have earned him this praise.

Dr. Conant, a leader in organic chemistry, has, during the entire planning, development, and production eras of the District, proven himself an indefatigable "anthing and everything for the project no matter what its personal inconvenience."

To Major General L. R. Groves, Dr. Conant gave sound advice and strong support in those trying moments when others were cautioning delay and arguing against going ahead with construction until proof as to feasibility had been obtained. This was particularly true with both of the major plants at Oak Ridge, Tennessee. This helpful support prompted General Groves to remark, "Dr. Conant has the gambling spirit of the New England pioneers -- a calculated gambling spirit."

During the formative periods of this breath-taking scientific project, there were naturally moments of deep concern of failure. In these dark moments, Dr. Conant proved himself to be the unselfish and truly great "statesman of science" to all his co-workers. He gave the impression that he would carry far more than his own part in any failure of the project--if failure it were.

Dr. Conant served on the General Policy Group of the project, along with former Vice President Henry A. Wallace, Secretary of War Henry L. Stimson, and Dr. Vannevar Bush. He also was a member of the Military Policy Committee as alternate to Dr. Bush, and a member of the Combined Policy Committee. When the Interim Committee was established to recommend the future national policy, Dr. Conant was again drafted as a member.

Dr. Conant was born in Dorchester, Massachusetts, March 26, 1893, the son of James Scott and Jennett (Orr) Conant. He received his AB at Harvard University in 1913 and his Ph. D. at the same University in 1916. Degrees in Law and the Sciences have been awarded him by many leading universities in America, as well as degrees from Oxford and Cambridge Universities in England.

On April 17, 1921, Dr. Conant married Grace Thayer Richards, the daughter of Theodore Richards, a Nobel prize winner. They have two sons, James Richards Conant and Theodore Richards Conant.

Dr. Conant served in the last World War, reaching the grade of Major in the Chemical Warfare Service in 1918.

Dr. Conant is an authority on organic chemistry, reduction and oxidation, hemoglobin, free radicals, quantitative study of organic reactions, super-acid solutions and chlorophyl and, despite his protestation to the contrary, on atomic energy.

Dr. Conant is a chairman or member of the National Defense Research Committee.

He is a man of a trim figure giving the appearance of keeping himself in fine physical condition, even in these time-consuming war days. He is a mountain climber of some renown.

He lives with his family in Cambridge, Massachusetts.

1-B

WAR DEPARTMENT
WASHINGTON D. C.

IMMEDIATE RELEASE

Dr. Richard C. Tolman
Scientific Adviser

Dr. Richard Chace Tolman, an elder "scientific statesman", is a tall, slender physicist of charming manner, with a handsome face and kindly eyes; but underneath this gracious exterior is a firm mind and an obvious, keen discernment of other people.

Dr. Tolman, normally the dean of the Graduate School of the California Institute of Technology, served as a scientific advisor to Major General L. R. Groves, giving aid and advice gained from his years of teaching and research. Dr. Tolman has proven himself to be a diplomat, in addition to being a "scientific statesman" of high caliber. It fell upon him to investigate many of the difficult scientific problems with which General Groves has been faced. He was able to do this because of his own knowledge and the profound respect in which he was held among the various scientists. Dr. Tolman is typical of the best of his profession and, therefore, understood by his co-workers and, in turn, has a keen insight of men in like professions.

Dr. Tolman was born in West Newton, Massachusetts, on March 4, 1881. He received his SB at the Massachusetts Institute of Technology in 1903 and his Ph. D. at the same institution in 1910. He was awarded the Sc. D. at Princeton University in 1942.

He married Ruth Sherman on August 5, 1924.

Dr. Tolman is scientific advisor to the Combined Policy Committee of the Manhattan Engineer District.

Dr. Tolman served in the last World War as a Major, Chemical Warfare Service in 1918.

Dr. Tolman is an authority on ionization, colloids, relativity of motion, metallic conductors, principle of similitude, statistical mechanics, quantitative theory, cosmology and relative thermodynamics.

Dr. Tolman is a sailing enthusiast. As a great fisherman, even today he swells up with pride when he recalls a 51-pound salmon he killed in 1935 in the Campbell River, Vancouver Island, British Columbia.

While he is living in Washington, D. C., at the present time, his permanent address is Pasadena, California.

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

Urey, Harold Clayton
Chemist

Born: Washington, Indiana, April 29, 1893

Education: BS University of Montana 1917; Ph. D University of California 1923; University of Copenhagen 1923-24; D"Sc. University of Montana and Princeton University

Experience: Teacher rural schools 1911-14
Chemist, Barret Chemical Co., Philadelphia, Pa., 1917-19
Instructor chemistry 1919-21 at University of Montana
Associate professor Columbia University 1929-34
Executive Officer department chemistry Columbia University since 1939

Nobel Prize in chemistry 1934
Davy medal Royal Society of London 1940

Specialized in - Structure of atoms and molecules; thermodynamic properties of gases; separation of Isotopes; and Discoverer of hydrogen atom of atomic weight two.

Residence: Leonia, New Jersey

Marital Status: Married Frieda Daum, June 12, 1926; children, Frieda, Mary, John.

Bush, Vannevar, B.

Born: Everett, Mass. March 11, 1890

Education: B.S., M.S. Tufts College, 1913; Eng. D.MIT, 1916; LLDs Brown, Middlebury, 1939; Johns Hopkins, 1940; Yale 1942; Harvard and Williams, 1941.

Present occupation and address: Carnegie Institution, Washington, D. C.

Experience: General Electric Test Dept. 1913
Inspection Dept. U. S. Navy, 1914
Tufts College as Inst. and Ass't Prof. Math. and Electric Eng. 1914-17
Submarine Research, U. S. Navy, 1917-18
Consulting Eng. Amer. Radio and Research Corp. 1917-22
1919-38 with MIT as Asst. Prof; Prof. and Dean of Eng. since 1938; Pres. Carnegie Institution, Wash., D. C. since 1939.

Regent Smithsonian Institution; life member Mass. Inst. Tech. Corp.; Fellow Am. Inst. E. E. (dir.); Am. Acad. Arts and Sciences, etc.

Director, Office of Scientific Research and Development, since 1941

Authority on: Circuit theory, analyzing machines, gaseous conduction, dielectics.

Marital Status: Married Phoebe Davis, September 5, 1916; children, Richard Davis, John Hathaway

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

Compton, Arthur, H.

Born: 10 Sept. 1892, Wooster, Ohio

Education: B.S. College of Wooster, 1913; also Sc. D. same, 1927; MA Princeton, 1914; Ph. D 1916; Cambridge (England) 1919-20; DSc. Yale, 1929; Brown, 1935; Harvard, 1936.

Experience: Fellow Princeton 1915-16
Inst. U. Minn. Physics 16-17
Research Eng. Westinghouse Lamp 17-19
Research Fellow Cavendish Lab., Cambridge 19-20
Hd. Physics Dept. Washington U. 20-23
Prof. Physics U. of Chicago 23-29, Dean Physics since 1940
Fellow Balliol, 34-35
Research Assoc. since 1931
Chancellor Washington University, St. Louis, Mo., June 1945

Authority: Physicist

Residence: Chicago, Illinois

Martial Status: Married Betty Charity McCloskey, June 28, 1916; children, Arthur Alan, John Joseph.

Lawrence, Ernest O.

Born: 8 Aug. 1901; Canton S. D.

Education: AB U. of S.D., 1922; AM U. of Minn. 1923; Ph. D. Yale, 1925; ScD U. of S.D. 1936; Princeton, Yale, Stevens 1937; Harvard, U. of Chicago, 1941.

Experience: National Research Fellow, Yale 25-27
U. of California and Radiation Lab. Dir. since 1940

Authority: Physicist

Residence: Berkeley, California

Martial Status: Married Kimberly Blumer, 1932; Children--John Eric, Margaret Bradley, Mary Kimberly, Robert Don.

WAR DEPARTMENT
WASHINGTON, D. C.

IMMEDIATE RELEASE

Dr. J. Robert Oppenheimer
Pioneered Development

Dr. J. Robert Oppenheimer, a **physics professor** at the University of California at Berkeley, California, and a leading scientist in the structure of the atom and the nuclear energies, was one of that early group who conceived the practical possibilities of the Atomic Bomb.

At the Atomic Bomb Project Laboratory in New Mexico, Dr. Oppenheimer, in association with other outstanding experts, definitely proved by test that the materials produced at the Clinton Engineer Works, Oak Ridge, Tennessee, and the Hanford Engineer Works, Pasco, Washington, held the secret of the Atomic Bomb. Now the Jap has felt that bomb.

Many of Dr. Oppenheimer's co-workers, the selected top men of their fields from all over the world, consider him not only a leading teacher but a man of boundless energy, rare common-sense, great personal charm and possessing tremendous organizational abilities. One of his associates has said of him, "Oppie is so smart no one can fool him for a second - he knows more about most of our specialties than we know ourselves-- in fact he's the smartest of the lot in everything".

Dr. Oppenheimer is a great horseman. He stables a number of fine horses on his ranch in the Pecos Valley near Santa Fe.

Dr. Oppenheimer was born in New York City on April 22, 1904. He was graduated from Harvard in 1925 and the following year was a student at Cambridge, England. He received his Ph. D. from Gottingen University in Germany in 1927. Dr. Oppenheimer was a National Research Fellow in 1927-28 and an International Education Board Fellow in 1928-29. After 1929 Dr. Oppenheimer was Professor of Physics at the University of California and the California Institute of Technology. He is a Fellow of the American Academy of Arts and Sciences, the American Physical Society, the American Philosophical Society, and the National Academy of Sciences. Dr. Oppenheimer has contributed to our basic knowledge of the nature of matter, electricity, and radiation, and of the constitution of stars. A large number of prominent scientists have been his students; through them, as well as through his own investigations, he has had a decisive influence in the progress of modern atomic physics.

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

August 8, 1945

MEMORANDUM FOR THE PRESS:

In response to inquiries from the press regarding news stories appearing in this morning's newspapers based on an interview with Dr. Harold Jacobson, the War Department today issued the following statement:

"In the opinion of the most competent experts who have been studying all phases of the effects of the bomb for a number of years there is no basis for Dr. Jacobson's speculations with respect to radioactivity. There has been no expectation by these same experts of any such radioactive phenomena as he decribes."

Dr. J. R. Oppenheimer, the head of this phase of the work, when asked for his views said, "Based on all of our experimental work and study, and on the results of the test in New Mexico, there is every reason to believe that there was no appreciable radioactivity on the ground at Hiroshima and what little there was decayed very rapidly."

END

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

August 9, 1945

MEMORANDUM FOR THE PRESS:

The Secretary of War, the Honorable Henry L. Stimson, today made the following statement:

The press conference this morning was cancelled owing to an engagement which I had at the White House. I had expected to make some general reflections at the conference in reference to the atomic bomb, and certain specific comment in reference to questions which had been asked. My general reflections were as follows:

Great events have happened. The world is changed and it is time for sober thought. It is natural that we should take satisfaction in the achievements of our science, our industry, and our Army in creating the atomic bomb, but any satisfaction we may feel must be overshadowed by deeper emotions.

The result of the bomb is so terrific that the responsibility of its possession and its use must weigh heavily on our minds and on our hearts. We believe that its use will save the lives of American soldiers and bring more quickly to an end the horror of this war which the Japanese leaders deliberately started. Therefore, the bomb is being used.

No American can contemplate what Mr. Churchill has referred to as "this terrible means of maintaining the rule of law in the world" without a determination that after this war is over this great force shall be used for the welfare and not the destruction of mankind.

My specific statement is as follows:

A great many questions have been asked about the effect of the Atomic Bomb and the Declaration of War by Russia on our military strategy and the size of the Army.

The War Department will, of course, appraise the military situation and the size of the Army in the light of the successful use of the bomb and the new Declaration of War. These possibilities have been in our minds for many months. We shall also give heed to any new factors which may develop from day to day. But we shall not do our duty if we plan for the reduction of the Army by even one man below the number which we believe may be needed for the complete defeat of Japan with the least possible loss of American lives.

My further comments on this subject will be found in a reply on the same subject which I have sent to Senator Johnson.

END

FUTURE RELEASE
PLEASE NOTE DATE

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E R E L E A S E

FOR RELEASE SUNDAY, AUGUST 12, 1945

For Radio Broadcast after
9:00 P.M., EWT, Saturday, August 11, 1945

ELABORATE SECURITY MEASURES PROTECTED SECRET OF ATOMIC BOMB

An intelligence and security organization which operated under such severe and stringent regulations that even representatives of the Federal Bureau of Investigation were required to have special passes for entry into the various installations throughout the country, protected the atomic bomb secret in the three-year period it took to reach the project's objective.

In a release today giving official recognition to the Military Intelligence personnel who pursued their activities anonymously and who played the major part in controlling the intelligence and security aspects of the atomic bomb project, the War Department gave in general outline the story of how the war's best-kept secret was kept. At the same time, the War Department emphasized that security of the project was still of highest importance on all information not officially released.

As an organization within an organization, the Military Intelligence Division of the Manhattan Engineer District was organized under the direct personal supervision of Major General Leslie R. Groves, officer in charge of the atomic bomb project, who was directed by personal letter in 1942 from President Roosevelt to take "extraordinary" steps to maintain security and secrecy.

The organization which General Groves directed to operate as an independent agency outside of G-2 and specifically as a separate unit under the Manhattan District was set up when General Groves selected from the Military Intelligence Division of the War Department two officers to act with and for him in establishing intelligence and security policies. These officers, both of whom have made extraordinary records in the Intelligence Division, were Colonel John Lansdale, Jr., of Cleveland, Ohio, and Lieutenant Colonel W. A. Consodine, of Newark, New Jersey.

They in turn handpicked a group of Intelligence Officers and Agents for what was to be the most difficult security job of all time. This detachment of officers and agents was then assigned to Colonel K. D. Nichols, District Engineer of the Manhattan Engineer District, with Major H. K. Calvert, of Oklahoma City in charge. Major Calvert was later transferred to London to handle foreign intelligence for the project, and Lieutenant Colonel W. B. Parsons, of Seattle, Washington, took command of the detachment.

MORE

In an extraordinary departure from usual Army channels, this detachment was responsible directly only to General Groves and Colonel Nichols. Members of the detachment were spread throughout this country from Washington to California and from Maine to Florida with their headquarters at Oak Ridge, Tennessee, site of the Clinton Engineer Works. Red tape was cut, short cuts were taken, formalities done away with. "Protect the Project" became the watchword of the group.

Personnel at all project installations were screened exclusively by the District's Intelligence Division for the elimination of undesirables. Security and secrecy agreements were executed by all and exhaustive loyalty investigations were made of key persons. Elaborate precautions were taken against espionage and sabotage. Every known method to insure production and shipment security was taken advantage of.

Information was compartmentalized so that each person knew only such information as was needed to do his or her part of the job. Army officers themselves were cognizant of only their particular phase of the work. A security of information program was instituted to develop individual responsibility and military police were specially trained for internal and perimeter control of all installations.

As the operations of the Intelligence and Security Division developed, the bulk of the intelligence matters were developed under the supervision of General Groves' Washington office and the security program developed under the supervision of the District Engineer at Oak Ridge. There was complete coordination on both phases.

In a statement, Colonel Nichols declared:

"Regardless of the rank of those connected with Military Intelligence, each member did his part and did it well. The magnificent security job that was done could not have been accomplished without the whole-hearted support of all concerned. The G-2 Division of the War Department, the Security and Intelligence Divisions of all nine service commands, office of Naval Intelligence, FBI, and each and every loyal American citizen who worked for the Manhattan District contributed to the success of the security of this project. In fact, America itself gave security to its own greatest project."

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dg, Dm, E, Ea, N.

8-10-45
1:15 P.M.

FUTURE RELEASE
PLEASE NOTE DATE

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E R E L E A S E

FOR RELEASE IN MORNING PAPERS, SUNDAY, AUGUST 12, 1945

For Radio Commentators after
9:00 P.M., EWT, Saturday, August 11, 1945

MEMORANDUM FOR EDITORS:

The War Department authorizes the release of the report by H. D. Smyth, Chairman of the Department of Physics of Princeton University and Consultant to Manhattan District United States Corps of Engineers, entitled:

A GENERAL ACCOUNT OF THE DEVELOPMENT OF METHODS
OF USING ATOMIC ENERGY FOR MILITARY PURPOSES
UNDER THE AUSPICES OF THE
UNITED STATES GOVERNMENT
1940 - 1945

The report is authorized for publication in Sunday morning papers of August 12 or for radio commentators after 9 P.M., EWT, August 11, 1945.

PLEASE WATCH THE RELEASE DATE CAREFULLY.

Nothing in this report discloses necessary military secrets as to the manufacture or production of the weapon. It does provide a summary of generally known scientific facts and gives an account of the history of the work, and of the role played in the development by different scientific and industrial organizations.

The best interests of the United States require the utmost cooperation by all concerned in keeping secret now and for all time in the future all scientific and technical information not given in this report or other official releases of information by the War Department.

The following addition should be made to paragraph 12.18 of the Smyth Report: "The War Department now authorizes the further statement that the bomb is detonated in combat, at such a height above the ground, as to give the maximum blast effect against structures, and to disseminate the radioactive products as a cloud. On account of the height of the explosion practically all the radioactive products are carried upward in the ascending column of hot air and dispersed harmlessly over a wide area. Even in the New Mexico test, where the height of explosion was necessarily low, only a very small fraction of the radioactivity was deposited immediately below the bomb."

END

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

August 13, 1945

IMMEDIATE RELEASE

432 WACS ASSIGNED TO MANHATTAN PROJECT

More than two years before the first atomic bomb was dropped on Japan, members of the Women's Army Corps were performing valuable duties in connection with its development, the War Department announced today.

A total of 432 Wacs were assigned to various phases of the work, with 275 being stationed at Oak Ridge, Tennessee. Wacs also were stationed at Santa Fe, New Mexico; Pasco, Washington; New York City, and London for work on the Manhattan District Project.

The women, hand-picked by Captain Arlene Scheidenheln of Mendota, Illinois, began arriving at Oak Ridge in June, 1943, although one WAC officer was assigned to the project as early as the fall of 1942. Captain Scheidenheln is commanding officer of Wacs at all installations concerned with the atomic bomb, dividing her time and attention among them.

Although the Wacs were constantly handling highly classified material and knew that the project on which they were working was of great importance, they did not know secret details. However, the manner in which the entire detachment performed its duties has received generous praise from the officials in charge of the atomic bomb project.

Of the Manhattan District Wacs, Major General Leslie R. Groves said that in his opinion the Wacs on the atomic bomb job "had performed the hardest type of Army duty any Wac has been called upon to do because it was hard work and long hours over a long period of time with no recognition and no chance to talk about their jobs."

The Wacs handled the classified files entirely and the teletype division. Because of the importance of their work, life for the women was different from life at an Army post. The Wacs working for the Manhattan District had no extra duties such as kitchen police or drill and they had maids to keep their barracks clean.

Sergeant Sarah G. Lackey, 8 Plympton Street, Cambridge, Massachusetts, was one of the first arrivals at Oak Ridge and remained there until she was assigned to the office of General Groves in Washington in March. Sergeant Lacky is voluble on the subject of her fellow Wacs at Oak Ridge. "They all have worked so hard and sacrificed so much as far as personal life is concerned," she said.

Another woman who has been reassigned from Oak Ridge to the office of General Groves, Corporal Lorene Sugarek of Skidmore, Texas, was assigned to the teletype division and at the peak worked "long hours," she said. How long is easy to figure as the result of her statement that "we had only two shifts and operated 24 hours daily, seven days each week."

Wacs with highly technical knowledge were used in the classified file section, according to Colonel Kenneth D. Nichols, Engineer for Manhattan District.

MORE

"I can't say enough in praise of the way they put out work on time," said Colonel Nichols. "They do their work exceptionally well. All of them worked long and hard hours and many jobs just couldn't have been done without them."

Dr. Richard C. Tolman, one of the leading scientists who worked on the atomic bomb, stated, "Great girls, the Wacs. They did a marvelous job for us."

When the Wacs first arrived at Oak Ridge they could not even guess what the project would become. Captain Scheidenheln said, "We used to point to a wooden stake and say 'That's the chapel,' and point to another identical stake with the comment 'That's the PX.'" All of that changed rapidly, however, and the project became so complete that Wacs stayed in camp during their off-duty hours because the nearest town had only few more recreational facilities than did Oak Ridge. The women assigned to Oak Ridge could leave the reservation on passes, if they so desired, but the women at the Santa Fe installation were not allowed to go any farther from the post than Santa Fe.

The three Wacs in the London office, which was set up as a special office reporting directly to General Groves, were Master Sergeant Edith M. Connerton, Seattle, Washington, who now has been transferred to Paris; Technical Sergeant Betty Jane Snyder-Tracy, Jackson, Michigan, who was in charge of all military records at Oak Ridge before being assigned to London, and Staff Sergeant Olive Cornelia Boyd, Mangum, Oklahoma.

Major Francis J. Smith, who was in charge of the London office and now lives in Arlington, Virginia, said that the Wacs did clerical and file work in the office and handled highly secret material and information.

For more reasons than one, the Wacs at Oak Ridge were happy to hear the announcement of the atomic bombing of Hiroshima. Captain Scheidenheln reported that "after all this time, it's a pleasure to be able to admit we're from Oak Ridge. Up to now, we've had to say Knoxville."

<u>END</u>

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, N, WAC.
6:00 P.M.

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

August 15, 1945

I M M E D I A T E R E L E A S E

The War Department announced today that official declaration of cessation of hostilities with Japan will not alter present security limitations on the release of information on the atomic bomb. "All individuals, groups, and organizations connected with the Manhattan Project will continue to comply with present security regulations," the War Department said.

"Loose talk and idle speculation, particularly by individuals now or formerly connected with the project, jeopardize the future of the Nation. It is the duty of every citizen, in the interest of national safety, to keep all discussion of this subject within the limits of information disclosed in official releases."

END

DISTRIBUTION: Aa, Af, B, D (except Do), N.

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

FUTURE RELEASE

FOR RELEASE SUNDAY, SEPTEMBER 9, 1945

EYE WITNESS ACCOUNT
ATOMIC BOMB MISSION OVER NAGASAKI

NOTE TO EDITORS:

The following release was written by William L. Laurence, Science writer for the New York Times, and Special Consultant to the Manhattan Engineer District and former Pulitzer Prize winner. The story can be released with or without the use of Mr. Laurence's name.

WITH THE ATOMIC BOMB MISSION TO JAPAN, AUGUST 9 (DELAYED)--We are on our way to bomb the mainland of Japan. Our flying contingent consists of three specially designed B-29 Superforts, and two of these carry no bombs. But our lead plane is on its way with another atomic bomb, the second in three days, concentrating its active substance, and explosive energy equivalent to 20,000, and under favorable conditions, 40,000 tons of TNT.

We have several chosen targets. One of these is the great industrial and shipping center of Nagasaki, on the western shore of Kyushu, one of the main islands of the Japanese homeland.

I watched the assembly of this man-made meteor during the past two days, and was among the small group of scientists and Army and Navy representatives privileged to be present at the ritual of its loading in the Superfort last night, against a background of threatening black skies torn open at intervals by great lightning flashes.

It is a thing of beauty to behold, this "gadget." In its design went millions of man-hours of what is without doubt the most concentrated intellectual effort in history. Never before had so much brain-power been focused on a single problem.

This atomic bomb is different from the bomb used three days ago with such devastating results on Hiroshima.

I saw the atomic substance before it was placed inside the bomb. By itself it is not at all dangerous to handle. It is only under certain conditions, produced in the bomb assembly, that it can be made to yield up its energy, and even then it gives up only a small fraction of its total contents, a fraction, however, large enough to produce the greatest explosion on earth.

The briefing at midnight revealed the extreme care and the tremendous amount of preparation that had been made to take care of every detail of the mission, in order to make certain that the atomic bomb fully served the purpose for which it was intended. Each target in turn was shown in detailed maps and in aerial photographs. Every detail of the course was rehearsed, navigation, altitude, weather, where to land in emergencies. It came out that the Navy had submarines and rescue craft, known as "Dumbos" and "Super Dumbos," stationed at various strategic points in the vicinity of the targets, ready to rescue the fliers in case they were forced to bail out.

The briefing period ended with a moving prayer by the Chaplain. We then pro-

Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E R E L E A S E

FOR RELEASE SUNDAY, SEPTEMBER 9, 1945

EYE WITNESS ACCOUNT
ATOMIC BOMB MISSION OVER NAGASAKI

NOTE TO EDITORS:

The following release was written by William L. Laurence, Science writer for the New York Times, and Special Consultant to the Manhattan Engineer District and former Pulitzer Prize winner. The story can be released with or without the use of Mr. Laurence's name.

WITH THE ATOMIC BOMB MISSION TO JAPAN, AUGUST 9 (DELAYED)--We are on our way to bomb the mainland of Japan. Our flying contingent consists of three specially designed B-29 Superforts, and two of these carry no bombs. But our lead plane is on its way with another atomic bomb, the second in three days, concentrating its active substance, and explosive energy equivalent to 20,000, and under favorable conditions, 40,000 tons of TNT.

We have several chosen targets. One of these is the great industrial and shipping center of Nagasaki, on the western shore of Kyushu, one of the main islands of the Japanese homeland.

I watched the assembly of this man-made meteor during the past two days, and was among the small group of scientists and Army and Navy representatives privileged to be present at the ritual of its loading in the Superfort last night, against a background of threatening black skies torn open at intervals by great lightning flashes.

It is a thing of beauty to behold, this "gadget." In its design went millions of man-hours of what is without doubt the most concentrated intellectual effort in history. Never before had so much brain-power been focused on a single problem.

This atomic bomb is different from the bomb used three days ago with such devastating results on Hiroshima.

I saw the atomic substance before it was placed inside the bomb. By itself it is not at all dangerous to handle. It is only under certain conditions, produced in the bomb assembly, that it can be made to yield up its energy, and even then it gives up only a small fraction of its total contents, a fraction, however, large enough to produce the greatest explosion on earth.

The briefing at midnight revealed the extreme care and the tremendous amount of preparation that had been made to take care of every detail of the mission, in order to make certain that the atomic bomb fully served the purpose for which it was intended. Each target in turn was shown in detailed maps and in aerial photographs. Every detail of the course was rehearsed, navigation, altitude, weather, where to land in emergencies. It came out that the Navy had submarines and rescue craft, known as "Dumbos" and "Super Dumbos," stationed at various strategic points in the vicinity of the targets, ready to rescue the fliers in case they were forced to bail out.

The briefing period ended with a moving prayer by the Chaplain. We then proceeded to the mess hall for the traditional early morning breakfast before departure on a bombing mission.

MORE

1B

A convoy of trucks took us to the supply building for the special equipment carried on combat missions. This included the "Mae West," a parachute, a life boat, an oxygen mask, a flak suit and a survival vest. We still had a few hours before take-off time but we all went to the flying field and stood around in little groups or sat in jeeps talking rather casually about our mission to the Empire, as the Japanese home islands are known hereabouts.

In command of our mission is Major Charles W. Seeney, 25, of 124 Hamilton Avenue, North Quincy, Massachusetts. His flagship, carrying the atomic bomb, is named "The Great Artiste," but the name does not appear on the body of the great silver ship, with its unusually long, four-bladed, orange-tipped propellers. Instead it carried the number "77," and someone remarks that it is "Red" Grange's winning number on the Gridiron.

Major Seeney's co-pilot is First Lieutenant Charles D. Albury, 24, of 252 Northwest Fourth Street, Miami, Florida. The bombardier upon whose shoulders rests the responsibility of depositing the atomic bomb square on its target, is Captain Kermit K. Beahan, of 1004 Telephone Road, Houston, Texas, who is celebrating his twenty-seventh birthday today.

Captain Beahan has been awarded the Distinguished Flying Cross, the Air Medal, and one Silver Oak Leaf Cluster, the Purple Heart, the Western Hemisphere Ribbon, the European Theater ribbon and two battle stars. He participated in the first heavy bombardment mission against Germany from England on August 17, 1942, and was on the plane that transported General Eisenhower from Gibraltar to Oran at the beginning of the North African invasion. He has had a number of hair-raising escapes in combat.

The Navigator on "The Great Artiste" is Captain James F. Van Pelt, Jr., 27, of Oak Hill, West Virginia. The flight engineer is Master Sergeant John D. Kuharek, 32, of 1054 22nd Avenue, Columbus, Nebraska. Staff Sergeant Albert T. De Hart of Plainview, Texas, who celebrated his thirtieth birthday yesterday, is the tail gunner; the radar operator is Staff Sergeant Edward K. Buckley, 32, of 529 East Washington Street, Lisbon, Ohio. The radio operator is Sergeant Abe M. Spitzer, 33, of 655 Pelham Parkway, North Bronx, New York; Sergeant Raymond Gallagher, 23, of 5727 South Mozart Street, Chicago, Illinois, is assistant flight engineer.

The lead ship is also carrying a group of scientific personnel, headed by Commander Frederick L. Ashworth, U.S.N., one of the leaders in the development of the bomb. The group includes Lieutenant Jacob Beser, 24, of Baltimore, Maryland, an expert on airborne radar.

The other two Superforts in our formation are instrument planes, carrying special apparatus to measure the power of the bomb at the time of explosion, high speed cameras and other photographic equipment.

Our Superfort is the second in line. Its Commander is Captain Frederick C. Bock, 27, of 300 West Washington Street, Greenville, Michigan. Its other officers are Second Lieutenant Hugh C. Ferguson, 21, of 247 Windermere Avenue, Highland Park, Michigan, pilot; Second Lieutenant Leonard A. Godfrey, 24, of 72 Lincoln Street, Greenfield, Massachusetts, navigator; and First Lieutenant Charles Levy, 26, of 1954 Spencer Street, Philadelphia, Pennsylvania, bombardier.

The enlisted personnel of this Superfort are the following: Technical Sergeant Roderick F. Arnold, 28, of 130 South Street, Rochester, Michigan, flight engineer; Sergeant Ralph D. Curry, 20, of 1101 South 2nd Avenue, Hoopeston, Illinois, radio operator; Sergeant William C. Barney, 22, of Columbia City, Indiana, radar operator; Corporal Robert J. Stock, 21, of 415 Downing Street, Fort Wayne, Indiana, assistant flight engineer; and Corporal Ralph D. Belanger, 19, of Thendara, New York, tail gunner.

The scientific personnel of our Superfort includes: Staff Sergeant Walter Goodman, 22, of 1956 74th Street, Brooklyn, New York, and Lawrence Johnson, graduate student at the University of California, whose home is at Hollywood, California.

The third Superfort is commanded by Major James Hopkins, [illegible] North Queen

Avenue, North Quincy, Massachusetts. His flagship, carrying the atomic bomb, is named "The Great Artiste," but the name does not appear on the body of the great silver ship, with its unusually long, four-bladed, orange-tipped propellers. Instead it carried the number "77," and someone remarks that it is "Red" Grange's winning number on the Gridiron.

Major Seeney's co-pilot is First Lieutenant Charles D. Albury, 24, of 252 Northwest Fourth Street, Miami, Florida. The bombardier upon whose shoulders rests the responsibility of depositing the atomic bomb square on its target, is Captain Kermit K. Beahan, of 1004 Telephone Road, Houston, Texas, who is celebrating his twenty-seventh birthday today.

Captain Beahan has been awarded the Distinguished Flying Cross, the Air Medal, and one Silver Oak Leaf Cluster, the Purple Heart, the Western Hemisphere Ribbon, the European Theater ribbon and two battle stars. He participated in the first heavy bombardment mission against Germany from England on August 17, 1942, and was on the plane that transported General Eisenhower from Gibraltar to Oran at the beginning of the North African invasion. He has had a number of hair-raising escapes in combat.

The Navigator on "The Great Artiste" is Captain James F. Van Pelt, Jr., 27, of Oak Hill, West Virginia. The flight engineer is Master Sergeant John D. Kuharek, 32, of 1054 22nd Avenue, Columbus, Nebraska. Staff Sergeant Albert T. De Hart of Plainview, Texas, who celebrated his thirtieth birthday yesterday, is the tail gunner; the radar operator is Staff Sergeant Edward K. Buckley, 32, of 529 East Washington Street, Lisbon, Ohio. The radio operator is Sergeant Abe M. Spitzer, 33, of 655 Pelham Parkway, North Bronx, New York; Sergeant Raymond Gallagher, 23, of 5727 South Mozart Street, Chicago, Illinois, is assistant flight engineer.

The lead ship is also carrying a group of scientific personnel, headed by Commander Frederick L. Ashworth, U.S.N., one of the leaders in the development of the bomb. The group includes Lieutenant Jacob Beser, 24, of Baltimore, Maryland, an expert on airborne radar.

The other two Superforts in our formation are instrument planes, carrying special apparatus to measure the power of the bomb at the time of explosion, high speed cameras and other photographic equipment.

Our Superfort is the second in line. Its Commander is Captain Frederick C. Bock, 27, of 300 West Washington Street, Greenville, Michigan. Its other officers are Second Lieutenant Hugh C. Ferguson, 21, of 247 Windermere Avenue, Highland Park, Michigan, pilot; Second Lieutenant Leonard A. Godfrey, 24, of 72 Lincoln Street, Greenfield, Massachusetts, navigator; and First Lieutenant Charles Levy, 26, of 1954 Spencer Street, Philadelphia, Pennsylvania, bombardier.

The enlisted personnel of this Superfort are the following: Technical Sergeant Roderick F. Arnold, 28, of 130 South Street, Rochester, Michigan, flight engineer; Sergeant Ralph D. Curry, 20, of 1101 South 2nd Avenue, Hoopeston, Illinois, radio operator; Sergeant William C. Barney, 22, of Columbia City, Indiana, radar operator; Corporal Robert J. Stock, 21, of 415 Downing Street, Fort Wayne, Indiana, assistant flight engineer; and Corporal Ralph D. Belanger, 19, of Thendara, New York, tail gunner.

The scientific personnel of our Superfort includes: Staff Sergeant Walter Goodman, 22, of 1956 74th Street, Brooklyn, New York, and Lawrence Johnson, graduate student at the University of California, whose home is at Hollywood, California.

The third Superfort is commanded by Major James Hopkins, 1311 North Queen Street, Palestine, Texas. His officers are Second Lieutenant John E. Cantlon, 516 North Takima Street, Tacoma, Washington, pilot; Second Lieutenant Stanley C. Steinke, 604 West Chestnut Street, West Chester, Pennsylvania, navigator; and Second Lieutenant Myron Faryna, 16 Elgin Street, Rochester, New York, bombardier.

MORE

2B

The crew are Technical Sergeant George L. Brabenec, 9717 South Lawndale Avenue, Evergreen, Illinois; Sergeant Francis X. Dolan, 30-60 Warrent Street, Elmhurst, New York; Corporal Richard F. Cannon, 160 Carmel Road, Buffalo, New York; Corporal Martin G. Murray, 7356 Dexter Street, Detroit, Michigan, and Corporal Sidney J Bellamy, 529 Johnston Avenue, Trenton, New Jersey.

On this Superfort are also two distinguished observers from Great Britain, whose scientists played an important role in the development of the Atomic Bomb. One of these is Group Captain G. Leonard Cheshire, famous RAF pilot, who is now a member of the British Military Mission to the United States. The other is Dr. William G. Denny, Professor of Applied Mathematics London University, one of the group of eminent British scientists which has been working at the "Y-Site" near Santa Fe, New Mexico, on the enormous problems involved in taming the Atom.

Group Captain Cheshire, whose rank is the equivalent of that of Colonel in the AAF, was designated as an observer of the Atomic Bomb in action by Winston Churchill when he was still Prime Minister. He is now the official representative of Prime Minister Attlee.

We took off at 3:50 this morning and headed northwest on a straight line for the Empire. The night was cloudy and threatening, with only a few stars here and there breaking through the overcast. The weather report had predicted storms ahead part of the way but clear sailing for the final and climactic stages of our odyssey.

We were about an hour away from our base when the storm broke. Our great ship took some heavy dips through the abysmal darkness around us, but it took these dips much more gracefully than a large commercial airliner, producing a sensation more in the nature of a glide than a "bump" like a great ocean liner riding the waves. Except that in this case the air waves were much higher and the rhythmic tempo of the glide much faster.

I noticed a strange eerie light coming through the window high above in the Navigator's cabin and as I peered through the dark all around us I saw a startling phenomenon. The whirling giant propellers had somehow become great luminous discs of blue flame. The same luminous blue flame appeared on the plexiglass windows in the nose of the ship, and on the tips of the giant wings it looked as though we were riding the whirlwind through space on a chariot of blue fire.

It was, I surmised, a surcharge of static electricity that had accumulated on the tips of the propellers and on the deielelectric material in the plastic windows. One's thoughts dwelt anxiously on the precious cargo in the invisible ship ahead of us. Was there any likelihood of danger that this heavy electric tension in the atmosphere all about us may set it off?

I express my fears to Captain Bock, who seems nonchalant and imperturbed at the controls. He quickly reassures me:

"It is a familiar phenomenon seen often on ships. I have seen it many times on bombing missions. It is known as St. Elmo's Fire."

On we went through the night. We soon rode out the storm and our ship was once again sailing on a smooth course straight ahead, on a direct line to the Empire.

Our altimeter showed that we were traveling through space at a height of 17,000 feet. The theremometer registered an outside temperature of 33 degrees below zero centigrade (about 30 below Fahrenheit). Inside our pressurized cabin the temperature was that of a comfortable air-conditioned room, and a pressure corresponding to an altitude of 8,000 feet. Captain Bock cautioned me, however, to keep my oxygen mask handy in case of emergency. This, he explained, may mean either something going wrong with the pressure equipment inside the ship or a hole through the cabin by flak.

The first signs of dawn came shortly after 5:00 o'clock. Sergeant Curry, On this Superfort are also two distinguished observers from Great Britain, whose scientists played an important role in the development of the Atomic Bomb. One of these is Group Captain G. Leonard Cheshire, famous RAF pilot, who is now a member of the British Military Mission to the United States. The other is Dr. William G. Denny, Professor of Applied Mathematics London University, one of the group of eminent British scientists which has been working at the "Y-Site" near Santa Fe, New Mexico, on the enormous problems involved in taming the Atom.

Group Captain Cheshire, whose rank is the equivalent of that of Colonel in the AAF, was designated as an observer of the Atomic Bomb in action by Winston Churchill when he was still Prime Minister. He is now the official representative of Prime Minister Attlee.

We took off at 3:50 this morning and headed northwest on a straight line for the Empire. The night was cloudy and threatening, with only a few stars here and there breaking through the overcast. The weather report had predicted storms ahead part of the way but clear sailing for the final and climactic stages of our odyssey.

We were about an hour away from our base when the storm broke. Our great ship took some heavy dips through the abysmal darkness around us, but it took these dips much more gracefully than a large commercial airliner, producing a sensation more in the nature of a glide than a "bump" like a great ocean liner riding the waves. Except that in this case the air waves were much higher and the rhythmic tempo of the glide much faster.

I noticed a strange eerie light coming through the window high above in the Navigator's cabin and as I peered through the dark all around us I saw a startling phenomenon. The whirling giant propellers had somehow become great luminous discs of blue flame. The same luminous blue flame appeared on the plexiglass windows in the nose of the ship, and on the tips of the giant wings it looked as though we were riding the whirlwind through space on a chariot of blue fire.

It was, I surmised, a surcharge of static electricity that had accumulated on the tips of the propellers and on the deielelectric material in the plastic windows. One's thoughts dwelt anxiously on the precious cargo in the invisible ship ahead of us. Was there any likelihood of danger that this heavy electric tension in the atmosphere all about us may set it off?

I express my fears to Captain Bock, who seems nonchalant and imperturbed at the controls. He quickly reassures me:

"It is a familiar phenomenon seen often on ships. I have seen it many times on bombing missions. It is known as St. Elmo's Fire."

On we went through the night. We soon rode out the storm and our ship was once again sailing on a smooth course straight ahead, on a direct line to the Empire.

Our altimeter showed that we were traveling through space at a height of 17,000 feet. The theremometer registered an outside temperature of 33 degrees below zero centigrade (about 30 below Fahrenheit). Inside our pressurized cabin the temperature was that of a comfortable air-conditioned room, and a pressure corresponding to an altitude of 8,000 feet. Captain Bock cautioned me, however, to keep my oxygen mask handy in case of emergency. This, he explained, may mean either something going wrong with the pressure equipment inside the ship or a hole through the cabin by flak.

The first signs of dawn came shortly after 5:00 o'clock. Sergeant Curry, who had been listening steadily on his earphones for radio reports while maintaining a strict radio silence himself, greeted it by rising to his feet and gazing out the window. "It's good to see the day," he told me. "I get a feeling of claustrophobia hemmed in in this cabin at night."

MORE

3-B

He is a typical American youth, looking even younger than his 20 years. It takes no mind reader to read his thoughts.

"It's a long way from Hoopeston, Illinois," I find myself remarking.

"Yep," he replies, as he busies himself decoding a message from outer space.

"Think this atomic bomb will end the war?" he asks hopefully.

"There is a very good chance that this one may do the trick," I assure him, "but if not then the next one or two surely will. Its power is such that no nation can stand up against it very long."

This was not my own view. I had heard it expressed all around a few hours earlier before we took off. To anyone who had seen this man-made fireball in action, as I had less than a month ago in the desert of New Mexico, this view did not sound over-optimistic.

By 5:50 it was real light outside. We had lost our lead ship but Lieutenant Godfrey, our Navigator, informs me that we had arranged for that contingency. We have an assembly point in the sky above the little island of Yakoshima, southeast of Kyushu, at 9:10. We are to circle there and wait for the rest of our formation.

Our genial Bombardier, Lieutenant Levy, comes over to invite me to take his front row seat in the transparent nose of the ship and I accept eagerly. From that vantage point in space, 17,000 feet above the Pacific, one gets a view of hundreds of miles on all sides, horizontally and vertically. At that height the vast ocean below and the sky above seem to merge into one great sphere. I was on the inside of that firmament, riding above the giant mountains of white cumulous clouds, letting myself be suspended in infinite space. One hears the whirl of the motors behind one, but soon becomes insignificant against the immensity all around and is before long swallowed by it. There comes a point where space also swallows time, and one lives through eternal moments filled with an oppressive loneliness, as though all life had suddenly vanished from the earth and you are the only one left, a lone survivor traveling endlessly through interplanetary space.

My mind soon returns to the mission I am on. Somewhere beyond these vast mountains of white clouds ahead of me there lies Japan, the land of our enemy. In about four hours from now one of its cities, making weapons of war for use against us will be wiped off the map by the greatest weapon ever made by man. In one-tenth of a millionth of a second, a fraction of time immeasurable by any clock, a whirlwind from the skies will pulverize thousands of its buildings and tens of thousands of its inhabitants.

Our weather planes ahead of us are on their way to find out where the wind blows. Half an hour before target time we will know what the winds have decided.

Does one feel any pity or compassion for the poor devils about to die? Not when one thinks of Pearl Harbor and of the death march on Bataan.

Captain Bock informs me that we are about to start our climb to bombing altitude.

He manipulates a few knobs on his control panel to the right of him and I alternately watch the white clouds and ocean below me and the altimeter on the Bombardier's panel. We reached our altitude at 9:00 o'clock. We were then over Japanese waters, close to their mainland. Lieutenant Godfrey motioned to me to look through his radar scope. Before me was the outline of our assembly point. We shall soon meet our lead ship and proceed to the final stage of our journey.

We reached Yakoshima at 9:12 and there, about 4,000 feet ahead of us, was "The Great Artiste" with its precious load. I saw Lieutenant Godfrey and Sergeant Curry strap on their parachutes and I decided to do likewise.

We started circling. We saw little towns on the coastline, heedless of our

"Think this atomic bomb will end the war?" he asks hopefully.

"There is a very good chance that this one may do the trick," I assure him, "but if not then the next one or two surely will. Its power is such that no nation can stand up against it very long."

This was not my own view. I had heard it expressed all around a few hours earlier before we took off. To anyone who had seen this man-made fireball in action, as I had less than a month ago in the desert of New Mexico, this view did not sound over-optimistic.

By 5:50 it was real light outside. We had lost our lead ship but Lieutenant Godfrey, our Navigator, informs me that we had arranged for that contingency. We have an assembly point in the sky above the little island of Yakoshima, southeast of Kyushu, at 9:10. We are to circle there and wait for the rest of our formation.

Our genial Bombardier, Lieutenant Levy, comes over to invite me to take his front row seat in the transparent nose of the ship and I accept eagerly. From that vantage point in space, 17,000 feet above the Pacific, one gets a view of hundreds of miles on all sides, horizontally and vertically. At that height the vast ocean below and the sky above seem to merge into one great sphere. I was on the inside of that firmament, riding above the giant mountains of white cumulous clouds, letting myself be suspended in infinite space. One hears the whirl of the motors behind one, but soon becomes insignificant against the immensity all around and is before long swallowed by it. There comes a point where space also swallows time, and one lives through eternal moments filled with an oppressive loneliness, as though all life had suddenly vanished from the earth and you are the only one left, a lone survivor traveling endlessly through interplanetary space.

My mind soon returns to the mission I am on. Somewhere beyond these vast mountains of white clouds ahead of me there lies Japan, the land of our enemy. In about four hours from now one of its cities, making weapons of war for use against us will be wiped off the map by the greatest weapon ever made by man. In one-tenth of a millionth of a second, a fraction of time immeasurable by any clock, a whirlwind from the skies will pulverize thousands of its buildings and tens of thousands of its inhabitants.

Our weather planes ahead of us are on their way to find out where the wind blows. Half an hour before target time we will know what the winds have decided.

Does one feel any pity or compassion for the poor devils about to die? Not when one thinks of Pearl Harbor and of the death march on Bataan.

Captain Bock informs me that we are about to start our climb to bombing altitude.

He manipulates a few knobs on his control panel to the right of him and I alternately watch the white clouds and ocean below me and the altimeter on the Bombardier's panel. We reached our altitude at 9:00 o'clock. We were then over Japanese waters, close to their mainland. Lieutenant Godfrey motioned to me to look through his radar scope. Before me was the outline of our assembly point. We shall soon meet our lead ship and proceed to the final stage of our journey.

We reached Yakoshima at 9:12 and there, about 4,000 feet ahead of us, was "The Great Artiste" with its precious load. I saw Lieutenant Godfrey and Sergeant Curry strap on their parachutes and I decided to do likewise.

We started circling. We saw little towns on the coastline, heedless of our presence. We kept on circling, waiting for the third ship in our formation.

MORE

4-B

It was 9:56 when we began heading for the coastline. Our weather scouts had sent us code messages, deciphered by Sergeant Curry, informing us that both the primary target as well as the secondary were clearly visible.

The winds of destiny seemed to favor certain Japanese cities that must remain nameless. We circled about them again and again and found no opening in the thick umbrella of clouds that covered them. Destiny chose Nagasaki as the ultimate target.

We had been circling for some time when we noticed black puffs of smoke coming through the white clouds directly at us. There were 15 bursts of flak in rapid succession, all too low. Captain Bock changed his course. There soon followed eight more bursts of flak, right up to our altitude, but by this time we were too far to the left.

We flew southward down the channel and at 11:33 crossed the coastline and headed straight for Nagasaki about a hundred miles to the west. Here again we circled until we found an opening in the clouds. It was 12:01 and the goal of our mission had arrived.

We heard the pre-arranged signal on our radio, put on our ARC welder's glasses and watched tensely the maneuverings of the strike ship about half a mile in front of us.

"There she goes!" someone said. Out of the belly of the Artiste what looked like a black object came downward.

Captain Bock swung around to get out of range, but even though we were turning away in the opposite direction, and despite the fact that it was broad daylight in our cabin, all of us became aware of a giant flash that broke through the dark barrier of our ARC welder's lenses and flooded our cabin with an intense light.

We removed our glasses after the first flash but the light still lingered on, a bluish-green light that illuminated the entire sky all around. A tremendous blast wave struck our ship and made it tremble from nose to tail. This was followed by four more blasts in rapid succession, each resounding like the boom of cannon fire hitting our plane from all directions.

Observers in the tail of our ship saw a giant ball of fire rise as though from the bowels of the earth, belching forth enormous white smoke rings. Next they saw a giant pillar of purple fire, 10,000 feet high, shooting skyward with enormous speed.

By the time our ship had made another turn in the direction of the atomic explosion the pillar of purple fire had reached the level of our altitude. Only about 45 seconds had passed. Awe-struck, we watched it shoot upward like a meteor coming from the earth instead of from outer space, becoming ever more alive as it climbed skyward through the white clouds. It was no longer smoke, or dust, or even a cloud of fire. It was a living thing, a new species of being, born right before our incredulous eyes.

At one stage of its evolution, covering missions of years in terms of seconds, the entity assumed the form of a giant square totem pole, with its base about three miles long, tapering off to about a mile at the top. Its bottom was brown, its center was amber, its top white. But it was a living totem pole, carved with many grotesque masks grimacing at the earth.

Then, just when it appeared as though the thing has settled down into a state of permanence, there came shooting out of the top a giant mushroom that increased the height of the pillar to a total of 45,000 feet. The mushroom top was even more alive than the pillar, seething and boiling in a white fury of creamy foam, sizzling upwards and then descending earthward, a thousand old faithful geysers rolled into one.

thick umbrella of clouds that covered them. Destiny chose Nagasaki as the ultimate target.

We had been circling for some time when we noticed black puffs of smoke coming through the white clouds directly at us. There were 15 bursts of flak in rapid succession, all too low. Captain Bock changed his course. There soon followed eight more bursts of flak, right up to our altitude, but by this time we were too far to the left.

We flew southward down the channel and at 11:33 crossed the coastline and headed straight for Nagasaki about a hundred miles to the west. Here again we circled until we found an opening in the clouds. It was 12:01 and the goal of our mission had arrived.

We heard the pre-arranged signal on our radio, put on our ARC welder's glasses and watched tensely the maneuverings of the strike ship about half a mile in front of us.

"There she goes!" someone said. Out of the belly of the Artiste what looked like a black object came downward.

Captain Bock swung around to get out of range, but even though we were turning away in the opposite direction, and despite the fact that it was broad daylight in our cabin, all of us became aware of a giant flash that broke through the dark barrier of our ARC welder's lenses and flooded our cabin with an intense light.

We removed our glasses after the first flash but the light still lingered on, a bluish-green light that illuminated the entire sky all around. A tremendous blast wave struck our ship and made it tremble from nose to tail. This was followed by four more blasts in rapid succession, each resounding like the boom of cannon fire hitting our plane from all directions.

Observers in the tail of our ship saw a giant ball of fire rise as though from the bowels of the earth, belching forth enormous white smoke rings. Next they saw a giant pillar of purple fire, 10,000 feet high, shooting skyward with enormous speed.

By the time our ship had made another turn in the direction of the atomic explosion the pillar of purple fire had reached the level of our altitude. Only about 45 seconds had passed. Awe-struck, we watched it shoot upward like a meteor coming from the earth instead of from outer space, becoming ever more alive as it climbed skyward through the white clouds. It was no longer smoke, or dust, or even a cloud of fire. It was a living thing, a new species of being, born right before our incredulous eyes.

At one stage of its evolution, covering missions of years in terms of seconds, the entity assumed the form of a giant square totem pole, with its base about three miles long, tapering off to about a mile at the top. Its bottom was brown, its center was amber, its top white. But it was a living totem pole, carved with many grotesque masks grimacing at the earth.

Then, just when it appeared as though the thing has settled down into a state of permanence, there came shooting out of the top a giant mushroom that increased the height of the pillar to a total of 45,000 feet. The mushroom top was even more alive than the pillar, seething and boiling in a white fury of creamy foam, sizzling upwards and then descending earthward, a thousand old faithful geysers rolled into one.

It kept struggling in an elemental fury, like a creature in the act of breaking the bonds that held it down. In a few seconds it had freed itself from its gigantic stem and floated upward with tremendous speed, its momentum carrying into the stratosphere to a height of about 60,000 feet.

MORE

5-B

But no sooner did this happen when another mushroom, smaller in size than the first one, began emerging out of the pillar. It was as though the decapitated monster was growing a new head.

As the first mushroom floated off into the blue it changed its shape into a flower-like form, its giant petal curving downward, creamy white outside, rose-colored inside. It still retained that shape when we last gazed at it from a distance of about 200 miles.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, N.

9-7-45
5:00 P.M.

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4680

September 12, 1945

IMMEDIATE RELEASE

GEN. GROVES AWARDED D.S.M.
FOR WORK ON ATOMIC BOMB PROJECT

Major General Leslie R. Groves, officer in charge of the atomic bomb project, was presented the Distinguished Service Medal by the Honorable Henry L. Stimson, Secretary of War, in a ceremony held in Mr. Stimson's office in The Pentagon this afternoon, the War Department announced.

The ceremony was attended by high-ranking Army officers, headed by General Thomas T. Handy, Deputy Chief of Staff; Dr. James B. Conant, President of Harvard University; and by General Groves' wife, son, and daughter, Mrs. Grace W. Groves, Lieutenant Richard H. Groves, and Miss Gwen Groves.

Before reading the citation, the Secretary of War congratulated General Groves on his accomplishments, and said that it was a very rare occasion when the work of a single officer has so much to do with the ending of a war.

The citation of the award follows:

"Major General Leslie Richard Groves, as Commanding General, Manhattan Engineer District, Army Service Forces, from June, 1942, to August, 1945, coordinated, administered and controlled a project of unprecedented, world-wide significance - the development of the Atomic Bomb. His was the responsibility for procuring materiel and personnel, marshaling the forces of government and industry, erecting huge plants, blending the scientific efforts of the United States and foreign countries, and maintaining completely secret the search for a key to release atomic energy. He accomplished his task with such outstanding success that in an amazingly short time the Manhattan Engineer District solved this problem of staggering complexity, defeating the Axis powers in the race to produce an instrument whose peacetime potentialities are no less marvelous than its wartime application is awesome. The achievement of General Groves is of unfathomable importance to the future of the nation and the world."

Others attending the ceremony included Robert P. Patterson, Under Secretary of War; Robert A. Lovett, Under Secretary of War for Air; Dr. Vannevar B. Bush, Director of the Office of Scientific Research and Development; General Jacob L. Devers, Commanding General, Army Ground Forces; General Brehon Somervell, Commanding General, Army Service Forces; Lieutenant General Ira Eaker, Deputy Commanding General, Army Air Forces.

Lieutenant General LeRoy Lutes, Chief of Staff, Army Service Forces; Lieutenant General John E. Hull, Assistant Chief of Staff for Operations, War Department General Staff; Lieutenant General Eugene Reybold, Chief of Engineers; Lieutenant General J. Lawton Collins, Chief of Staff, Army Ground Forces; Major General S. G. Henry, Assistant Chief of Staff for Personnel, War Department General Staff; Major General Clayton Bissell, Assistant Chief of Staff, G-2, War Department General Staff; Major General I. H. Edwards, Assistant Chief of Staff, G-3, War Department General Staff; Major General Russell L. Maxwell, Assistant Chief of Staff, G-4, War Department General Staff; Major General W. B. Persons, Director, Legislative and Liaison Division; Major General J. H. Hilldring, Director, Civil Affairs Division; Major General A. D. Surles, Director, War Department Bureau of Public Relations.

Brigadier General R. H. Dunlop, Director, Civilian Personnel Division, The Adjutant General's Office; Colonel William H. Kyle, Aide to the Secretary of War; Colonel H. M. Pasco, Secretary of the General Staff; Mr. Harvey H. Bundy, Mr. George L. Harrison, and Mr. John W. Martyn, special assistants to the Secretary of War.

In addition, a number of officers serving under General Groves in the Manhattan Engineer District attended the ceremony.

END

DISTRIBUTION: N, Y.

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

September 14, 1945

CONFIDENTIAL--NOT FOR PUBLICATION

NOTE TO EDITORS

The following memorandum is CONFIDENTIAL and NOT FOR PUBLICATION:

The President of the United States today made the following request for the cooperation of American editors and broadcasters and the public in protecting the secret of the atomic bomb. The President said that his action was in the national interest and not with any idea of imposing censorship upon the press or radio.

The request, herewith communicated to you in confidence, is as follows:

"In the interest of the highest national security, editors and broadcasters are requested to withhold information (beyond the official releases) without first consulting with the War Department, concerning scientific processes, formulas, and mechanics of operation and techniques employed in the operational use of the atomic bomb; location, procurement and consumption of uranium stocks; quality and quantity of production of these bombs; their physics and characteristics; and information as to the relative importance of the various methods or plants, or of their relative functions or efficiencies."

END

DISTRIBUTION: A, B, C, D, E, F, L, M, N.

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

September 19, 1945

I M M E D I A T E R E L E A S E

STATEMENT BY THE SECRETARY OF WAR

The Secretary of War, the Honorable Henry L. Stimson, made the following statement today at his final news conference:

I have called together you ladies and gentlemen of the press and radio for my final press conference as Secretary of War. In taking leave of you, I should like to tell you how greatly I have valued our association. In the midst of a war, there are many tensions. Tempers are apt to grow short. For my part, I feel that our differences have been unimportant during the five years I have been the subject of your scrutiny.

You have always seemed to me to be carrying out your duty to the public with a high regard for the ethics of your profession and the safety of the Nation. I know you have accepted with at least an outward show of cheerfulness the War Department's review of your copy. Now that hostilities are over, I am confident you realize how seldom the requirements of military security have been allowed to interfere with your freedom of action. I should like to take this occasion to offer you my sincere thanks for the quality and understanding of your service and to give you my best wishes for your future success.

During a rather long career in public life I have occupied a number of posts of importance. These five years as Secretary of War have been the high point of my experience, not only because of the heavy responsibility of guiding the Nation's military establishment, but because of the opportunity they offered me to serve the Nation in a great war. I shall always be grateful from the bottom of my heart to Mr. Roosevelt for giving me that opportunity.

There is no need to review the events of these years now. They are history, and no one has followed their development more closely than you. But on the eve of my retirement, I should like to leave my own impression of the situation in which this country finds itself at the conclusion of the greatest crisis in its history.

The United States is now not only at the peak of its military strength but it has attained an influence and leadership among all nations that is unprecedented. Now that we have arrived at that position we must make sure that we conserve it and use it in the cause of justice and peace throughout the world.

In my opinion, the maintenance of this preeminent position will depend on two factors. One of these is the acceptance by our people of the military and naval strength that necessarily go with leadership in the world today. The State Department will have increasing difficulty in making our voice effective in the councils of nations unless our people and our Government show their readiness to carry the inconveniences and burdens and sometimes sacrifices which accompany such leadership under the present unstable conditions.

The state of our military establishment in the future must be the constant concern not only of our Government but of our people. In particular, we must be alert that no system is established—however palatable it may seem—which fails to provide the power we need at this stage of the world's development.

We do not yet know the full implications of the release of atomic energy in relation to future military strategy but we do know that it is revolutionary. This will require the most careful study. We must not make early and easy assumptions that the days of armies and navies are over. We can be sure if war should come again that it would be awful in its sudden intensity, and we must never again allow ourselves to be caught in a state of complete unreadiness. And we can be sure that it will always be the duty of the citizens of these

1-A

September 19, 1945

IMMEDIATE RELEASE

STATEMENT BY THE SECRETARY OF WAR

The Secretary of War, the Honorable Henry L. Stimson, made the following statement today at his final news conference:

I have called together you ladies and gentlemen of the press and radio for my final press conference as Secretary of War. In taking leave of you, I should like to tell you how greatly I have valued our association. In the midst of a war, there are many tensions. Tempers are apt to grow short. For my part, I feel that our differences have been unimportant during the five years I have been the subject of your scrutiny.

You have always seemed to me to be carrying out your duty to the public with a high regard for the ethics of your profession and the safety of the Nation. I know you have accepted with at least an outward show of cheerfulness the War Department's review of your copy. Now that hostilities are over, I am confident you realize how seldom the requirements of military security have been allowed to interfere with your freedom of action. I should like to take this occasion to offer you my sincere thanks for the quality and understanding of your service and to give you my best wishes for your future success.

During a rather long career in public life I have occupied a number of posts of importance. These five years as Secretary of War have been the high point of my experience, not only because of the heavy responsibility of guiding the Nation's military establishment, but because of the opportunity they offered me to serve the Nation in a great war. I shall always be grateful from the bottom of my heart to Mr. Roosevelt for giving me that opportunity.

There is no need to review the events of these years now. They are history, and no one has followed their development more closely than you. But on the eve of my retirement, I should like to leave my own impression of the situation in which this country finds itself at the conclusion of the greatest crisis in its history.

The United States is now not only at the peak of its military strength but it has attained an influence and leadership among all nations that is unprecedented. Now that we have arrived at that position we must make sure that we conserve it and use it in the cause of justice and peace throughout the world.

In my opinion, the maintenance of this preeminent position will depend on two factors. One of these is the acceptance by our people of the military and naval strength that necessarily go with leadership in the world today. The State Department will have increasing difficulty in making our voice effective in the councils of nations unless our people and our Government show their readiness to carry the inconveniences and burdens and sometimes sacrifices which accompany such leadership under the present unstable conditions.

The state of our military establishment in the future must be the constant concern not only of our Government but of our people. In particular, we must be alert that no system is established—however palatable it may seem—which fails to provide the power we need at this stage of the world's development.

We do not yet know the full implications of the release of atomic energy in relation to future military strategy but we do know that it is revolutionary. This will require the most careful study. We must not make early and easy assumptions that the days of armies and navies are over. We can be sure if war should come again that it would be awful in its sudden intensity, and we must never again allow ourselves to be caught in a state of complete unreadiness. And we can be sure that it will always be the duty of the citizens of these United States to share in providing for the country the power that we must have to carry our responsibilities.

MORE

to carry

1-B

The second factor necessary to preserve our leadership is an attitude of trust and frankness on our part toward all nations working for collective security. It has been the inescapable conclusion of my years spent as Governor General of the Philippines, as Secretary of State and Secretary of War that cynicism and suspicion on our part can only breed a like response among those we suspect. By this I do not mean that our relations with other Governments should ever lack a practical sense of realism. But in the long run, I am convinced that a full and frank attitude of trust by our Government will strongly tend to lead to a like attitude on the part of all members of the brotherhood of nations.

In the present state of world affairs a strong military establishment is essential. I fervently hope that this condition will not always prevail. The United Nations are now moving toward an organization which I believe will reduce the chance of war by creating justice and better understanding among all nations. We should be false to the promise of this organization if we failed to give it our utmost confidence.

I cannot leave the War Department without giving some account, more personal than official, of my association with the Chief of Staff, General Marshall, during the five years we have worked together. Our day-to-day, almost hour-to-hour consideration of plans and policies on which the safety of the Nation depended has given me an unparalleled opportunity to measure the stature of this great and modest man.

In spite of the great prestige which General Marshall justly holds among his countrymen, I doubt that many fully realize how his leadership has counted. I know, because we could talk freely of it in private, how clearly he saw the inevitable involvement of this nation in the war and tried by every means at his disposal to prepare us for it.

A man in high office cannot always make public the things that are in his heart. Yet in his Biennial Report in July 1941, General Marshall uttered as strong a warning to the Nation as he appropriately could. His recommendation that the Selective Service men, the National Guardsmen and the Reserve officers taken into the Army for a year of service be retained beyond that period touched off a violent debate in the Congress. General Marshall fought to make clear the pressing need to hold these men in the service. To release them would have destroyed the Army which later we required so urgently. He won his battle by a single vote in the House of Representatives.

When Japan attacked, General Marshall's vision was displayed in the global view which he immediately took of our situation. From the beginning his concept of proper strategy was that we must defeat Germany first in order to gain victory in the shortest possible time. In spite of the far distance between the European and Pacific theaters of war, he saw them as separate battlefields of a single conflict. The major, the more menacing force, was Germany. How sound that strategy proved was shown when the Japanese collapsed four months after the German surrender.

From the very beginning, he insisted on unity between the services and among our Allies. He realized that only by this means could our combined resources be employed to the fullest advantage against the enemy. To achieve whole-hearted cooperation, he was always willing to sacrifice his own personal prestige. To him agreement was more important than any consideration of where the credit belonged. His firm belief that unity could be preserved in the face of divergent opinions was a decisive factor in planning throughout the war.

MORE

In all the military councils, General Marshall's leadership constantly pressed for adoption of the most direct means of defeating Germany. From the outset, he held to the plan that this must be accomplished by a cross-Channel invasion of Northern France. Other plans were proposed and considered. Marshall never swerved from his bold insistence of a frontal attack on the coast which would bring us quickly into contact with the mass of Germany's military forces on terrain favorable for their defeat.

There have been times when General Marshall's swift decisions have averted possible disaster. In the summer of 1942 when in a single battle Field Marshal Rommel had destroyed a large proportion of Britain's tanks in Libya, General Marshall unhesitatingly stripped our training forces of medium tanks and shipped them to Egypt as the only means of meeting this crisis. One of our armored divisions was at that time in a port of embarkation, ready to sail for further training in North Ireland. That division, too was divested of its armor and its shipment delayed until the tanks could be replaced. But the important thing was that Rommel had been stopped. The dangerous crisis was met. We know now that Marshall's estimate of this situation was correct. We know that Hitler intended to break through Egypt to the Near East. Had he succeeded, the entire course of the war would have been changed.

The man has a sure approach to every problem he studies. When we were determining the number of units of all sorts which would be required for victory, the combat divisions were fixed at an even hundred. General Marshall questioned that estimate. After going over our planned operations for all theaters and the timetable of war, he decided that 90 divisions should be sufficient, and in the end that figure was cut to 89. How accurate was his judgment can be gauged by the fact that at the close of the war, all but two of those 89 divisions had been committed to action in the field.

General Marshall's leadership takes its authority directly from his great strength of character. I have never known a man who seemed so surely to breathe the democratic American spirit. He is a soldier, and yet he has a profound distaste for anything that savors of militarism. He believes that every able-bodied citizen has a personal responsibility for the Nation's security and should be prepared to assume that responsibility whenever an emergency arises. But he is opposed to a large standing Army as un-American.

His trust in his commanders is almost legendary. During the critical period of the Ardennes breakthrough no messages went from the War Department to General Eisenhower which would require his personal decision and reply. This is standard practice with General Marshall. When one of his commanders is in a tight spot, he does everything possible to back him up. But he leaves the man free to accomplish his purpose unhampered.

He is likewise the most generous of men, keeping himself in the background so that his subordinates may receive full credit for duties well done.

His courtesy and consideration for his associates, of whatever rank, are remarked by all who know him. His devotion to the nation he serves is a vital quality which infuses everything he does. During the course of a long lifetime, much of it spent in positions of public trust, I have had considerable experience with men in Government. General Marshall has given me a new gauge of what such service should be. The destiny of America at the most critical time of its national existence has been in the hands of a great and good citizen. Let no man forget it.

<u>END</u>

DISTRIBUTION: Aa, Af, B, D (Except Do), N, T.

FUTURE RELEASE
PLEASE NOTE DATE

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E   R E L E A S E

FOR RELEASE UPON DELIVERY

REMARKS BY
THE HONORABLE ROBERT P. PATTERSON, SECRETARY OF WAR,
AT ARMY-NAVY "E" CEREMONIES, OAK RIDGE, TENNESSEE,
AT 5:30 P.M., CWT, SATURDAY, SEPTEMBER 29, 1945.

Today the Army and Navy say "well done." They say it with the red and b[illegible] banner that will fly over these great plants. They say it with the silver pi[illegible] that each of you will wear.

This evidence of your excellence--for that is what the "E" stands for--i[illegible] only the symbol. Today the world knows how great was that excellence. For i[illegible] there was one single instrument of war that brought back peace to the world, [illegible] was the bomb that you built here. We would have won without it, but it haste[illegible] the day of victory and saved many American lives.

Today the Army and Navy give voice to the thanks of the Nation, and of t[illegible] free world, for your skill and your devotion. With this award, they express their gratitude to you who made possible this smashing triumph of science.

You have played a leading role in what our great war leader, Secretary Stimson, described as the "greatest achievement of the combined efforts of sc[illegible] industry, labor and the military in all history." This was not achieved by r[illegible] mentation but by voluntary cooperation. Labor gave its utmost without asking [illegible] be told the purpose of the work. Industry gave its skill and "know-how" with[illegible] patent rights or profits. Scientists gave their knowledge without hope of re[illegible] All gave themselves unselfishly to this most difficult exploit, because their country called, and at the same time maintained a secrecy that made success possible.

Standing here in this great center of production, we find it hard to rea[illegible] ize that three years ago this was nothing more than pleasant Tennessee countr[illegible] side. Today it is the fifth greatest city in the great State of Tennessee. I[illegible] is the newest city in America, the city that will live in history as the site [illegible] the greatest secret project in this war or in any war.

Creating these factories and homes was a staggering construction job. Ne[illegible] before in history has a city of this size mushroomed up almost overnight. We who watched its progress know how quickly it grew. We know how you who built [illegible] sweated and labored in hot weather and in cold, in rain and mud.

Our first big job, of course, was to find you and get you here. Never before had it been necessary to recruit such a large force of workers so rapi[illegible]

MORE

and so secretly, the best workers we could find for the most important job of the war. And you did the job swiftly and well.

And as this great cluster of buildings grew, so did the ranks of our work We needed production workers, men and women with skills of all kinds, and we needed them quickly. Production for what? Well, it was a secret. There wasn much attraction in that kind of a job in a mysterious place far from your home and farms. But you came and you stayed, because of your devotion to your cou and your faith in the judgment and wisdom of the men charged with the heavy responsibility for this project. Your devotion and your faith will never be forgotten.

Now a word about your production record. The Army, you know, has the rep tation for asking industry to do the impossible. Here at the Clinton Engineer Works we asked for the miraculous. We set the production goals so high that could only be met if we got every possible break--if nothing unforeseen occurr And the record shows that most of those schedules were met. What the results were you have read in your newspapers. You will read them in the pages of his too.

But life at Oak Ridge was not all work. We tried to provide you with sur roundings as normal as those in any average community. You brought your wives and your children, and together all of you made a genuine American city out of Oak Ridge. You and your families were pioneers who gave substance and meanin to the greatest scientific development of our age. You and your families have had a share in the making of history.

Your work here at the Clinton Engineering Works came to a dramatic clima when the first atomic bomb fell on Hiroshima. That single bomb carried your faith and your labor to the winning of the war. The energy of free American working men and women was added to the energy of the atom.

The Japanese could not withstand this epic force. Already hard pressed c land, air and sea, they sued for peace.

The President and the Congress will determine the policies that will make atomic energy a bulwark in building a peaceful world.

And so today, as we face the future, I bring you the heartfelt thanks of War Department. I bring you the gratitude of a nation and of everyone concern in the preservation of a free civilization. You have won the greatest scientific battle of the war. You have opened up new vistas for peace and prosperi You have made history here at Oak Ridge.

END

DISTRIBUTION: A&NPA, N, Y, Speeches.
9-28-45
11:00 A.M.

STATEMENT BY
MAJOR GENERAL LESLIE R. GROVES
BEFORE THE MILITARY AFFAIRS COMMITTEE
OF THE HOUSE OF REPRESENTATIVES,
TUESDAY, OCTOBER 9, 1945

In coming before your committee today we are appealing for an opportunity to give up our existing powers. In the interest of the war effort, there was delivered into our care the responsibility for directing all activities relating to the release and use of atomic energy.

We have discharged that responsibility to the best of our ability. Thanks to the brilliant and selfless efforts of the thousands of scientists, engineers, industrialists, workers and Army and Navy officers associated with the project, and to the wise counsel of Secretary Stimson and his advisers and the members of the Military Policy Committee, our work achieved its purpose. It helped to shorten the war and to save the lives of American and Allied fighting men.

But the individual responsibility that was desirable in wartime should not be continued today. The hopes and fears of all mankind are so inextricably bound up with the future development of atomic energy, and the problems requiring immediate solution are so fundamental that control should be vested in the most representative and able body our democratic society is capable of organizing.

The bill you are considering today is intended to create such a body.

It would establish a commission of nine distinguished citizens, with a revolving membership to guard against political domination or the development within the commission of frozen attitudes that would act as a brake on experimentation and new ideas.

Within the limits of general policy, as defined by Congress, and of appropriations, as authorized by Congress, the commission would have broad power to conduct or supervise all research and manufacturing activities relating to the use of atomic energy for military or civilian purposes; to control the raw materials from which atomic energy may be derived and to provide for the security of information and property connected with the release of atomic energy.

It is also the aim of this legislation that the commission capitalize on the initiative and ingenuity of American science and American industry by giving as much freedom and encouragement to private research and private enterprise in this field as it is possible to give consistent with the requirement of American security.

The success of the Manhattan District Project would have been impossible without the support it received from colleges and universities, from large and small industrial corporations and from the skill of American labor.

Our progress in future atomic development will depend equally on the utilization of the fullest support that can be drawn from all of these sources. At the root of this legislation lies a recognition of the importance of maintaining continued leadership by the United States in scientific progress, utilizing existing private and public facilities to the broadest extent.

The bill specifically provides for the most widespread practical distribution of licenses for atomic research and development within the United States and enjoins the commission to discourage the growth of monopoly in trades and industries affected by these activities.

In order that the membership of the commission may include outstanding leaders in American life, its members are not expected to devote their full time to the work of the commission but are left free to engage in other activities.

The day-by-day work under the law would be carried out under the direction to give up our existing powers. In the interest of the war effort, there was delivered into our care the responsibility for directing all activities relating to the release and use of atomic energy.

We have discharged that responsibility to the best of our ability. Thanks to the brilliant and selfless efforts of the thousands of scientists, engineers, industrialists, workers and Army and Navy officers associated with the project, and to the wise counsel of Secretary Stimson and his advisers and the members of the Military Policy Committee, our work achieved its purpose. It helped to shorten the war and to save the lives of American and Allied fighting men.

But the individual responsibility that was desirable in wartime should not be continued today. The hopes and fears of all mankind are so inextricably bound up with the future development of atomic energy, and the problems requiring immediate solution are so fundamental that control should be vested in the most representative and able body our democratic society is capable of organizing.

The bill you are considering today is intended to create such a body.

It would establish a commission of nine distinguished citizens, with a revolving membership to guard against political domination or the development within the commission of frozen attitudes that would act as a brake on experimentation and new ideas.

Within the limits of general policy, as defined by Congress, and of appropriations, as authorized by Congress, the commission would have broad power to conduct or supervise all research and manufacturing activities relating to the use of atomic energy for military or civilian purposes; to control the raw materials from which atomic energy may be derived and to provide for the security of information and property connected with the release of atomic energy.

It is also the aim of this legislation that the commission capitalize on the initiative and ingenuity of American science and American industry by giving as much freedom and encouragement to private research and private enterprise in this field as it is possible to give consistent with the requirement of American security.

The success of the Manhattan District Project would have been impossible without the support it received from colleges and universities, from large and small industrial corporations and from the skill of American labor.

Our progress in future atomic development will depend equally on the utilization of the fullest support that can be drawn from all of these sources. At the root of this legislation lies a recognition of the importance of maintaining continued leadership by the United States in scientific progress, utilizing existing private and public facilities to the broadest extent.

The bill specifically provides for the most widespread practical distribution of licenses for atomic research and development within the United States and enjoins the commission to discourage the growth of monopoly in trades and industries affected by these activities.

In order that the membership of the commission may include outstanding leaders in American life, its members are not expected to devote their full time to the work of the commission but are left free to engage in other activities.

The day-by-day work under the law would be carried out under the direction of an Administrator and a Deputy Administrator, who will, of course, devote

MORE

their entire time to their duties. These, too, should be men of the highest calibre who are willing to make the financial sacrifice necessary to accept such posts in the face of industry's ability to make more tempting salary offers.

The scientific and other personnel to be employed by the commission would be chosen without regard for civil service regulations. My experience in operating the Manhattan District Project leads me to the conclusion that such a provision is essential if atomic development is to proceed with efficiency and effectiveness.

It is hoped that this work will attract young and highly-talented scientists who will stay with the commission five or six years, after which they would leave to take better-paying jobs outside. I will say quite frankly that they should not be men who look forward to lifetime jobs on the project. The key staff of the project, both scientific and administrative, should be a rotating one so that the commission will not degenerate into a static organization with an inflexible approach to the problems involved in this vast and complicated field.

I should like before I close to emphasize what Secretary Patterson had already said about the desirability of speedy action on this measure. The decisions we now have to make will affect the welfare of the United States and of the world for many years to come. They should not be made by one man. I am convinced that the prompt adoption of this bill will be a powerful and necessary stimulus to continued advances in our development and control of atomic energy.

Here, more than ever before in our history, is a case in which man is the keeper of his own destiny. In irresponsible hands, the power of the atom might destroy the world. Properly developed and properly administered, this same force can help light the way to a future of lasting peace and prosperity for all the people of the world. This bill is an important step in that direction.

END

STATEMENT BY
THE HONORABLE ROBERT P. PATTERSON, SECRETARY OF WAR,
BEFORE THE MILITARY AFFAIRS COMMITTEE
OF THE HOUSE OF REPRESENTATIVES
TUESDAY, OCTOBER 9, 1945

The atomic bombs that dropped on Hiroshima and Nagasaki did more than destroy the Japanese will to fight. They delivered into the custody of the people of this country the responsibility for developing and administering a force of such incalculable potentialities that we are even now only dimly aware of their extent.

It is the desire of every American that this mighty power be used to make secure and lasting the peace for which a quarter of a million of our young men gave their lives and also that the horizons of our knowledge be pushed outward so that atomic energy may become as effective an element in the enrichment of our daily lives as it proved itself in the ending of the war against Japan.

In the years when the existence of our nation was threatened and the speed of our victory depended on the speed with which we unlocked the energy that lies within the atom, the responsibility for directing research, constructing facilities and producing weapons in this field was entrusted to the War Department.

General Groves, who is here with me today, was placed in charge of the project and given unlimited authority to carry this urgent war task to a successful conclusion. He reported directly to the Chief of Staff and the Secretary of War. Time was the only scarce commodity, so far as his assignment was concerned. Everything else was made available as fully and as fast as it was needed. Over all our work hung the ever-present possibility that Germany or Japan might discover the secret first and that the United States might have to bear the crushing impact of the first atomic bomb.

We succeeded in our mission, and thereby cut months from the probable length of the war. We would have won without the bomb, but thousands of American soldiers who are alive today would have died before final victory was achieved.

The story of our success is a story of teamwork. The combined efforts of science, management, labor and the armed forces produced the atomic bomb. Now it is up to us to turn this discovery into a bulwark of the peace it helped to win.

No single department of government should be charged with a responsibility that affects the whole future of mankind so directly and so immediately. Even the winning of a war seems a minor matter by comparison with the importance of applying fully and controlling wisely the power of the atom.

If we misapply the knowledge we now have or fail to carry forward our research with the utmost vigor, we may be passing a sentence of death on the future of our own country and the entire world.

The bill that is before your Committee today reflects the views of the men who were most responsible for the wartime development of atomic energy as to the most effective method for controlling and carrying forward development in this field within the United States. It embodies all the points on domestic policy recommended by the President in his message to the Congress last week.

The manner in which this legislation was prepared will be of interest to you. In May of this year, two months before the test in New Mexico showed conclusively that the atomic bomb would work, Secretary Stimson, with the approval of the President, appointed an Interim Committee to recommend legisla-

1-A

The atomic bombs that dropped on Hiroshima and Nagasaki did more than destroy the Japanese will to fight. They delivered into the custody of the people of this country the responsibility for developing and administering a force of such incalculable potentialities that we are even now only dimly aware of their extent.

It is the desire of every American that this mighty power be used to make secure and lasting the peace for which a quarter of a million of our young men gave their lives and also that the horizons of our knowledge be pushed outward so that atomic energy may become as effective an element in the enrichment of our daily lives as it proved itself in the ending of the war against Japan.

In the years when the existence of our nation was threatened and the speed of our victory depended on the speed with which we unlocked the energy that lies within the atom, the responsibility for directing research, constructing facilities and producing weapons in this field was entrusted to the War Department.

General Groves, who is here with me today, was placed in charge of the project and given unlimited authority to carry this urgent war task to a successful conclusion. He reported directly to the Chief of Staff and the Secretary of War. Time was the only scarce commodity, so far as his assignment was concerned. Everything else was made available as fully and as fast as it was needed. Over all our work hung the ever-present possibility that Germany or Japan might discover the secret first and that the United States might have to bear the crushing impact of the first atomic bomb.

We succeeded in our mission, and thereby cut months from the probable length of the war. We would have won without the bomb, but thousands of American soldiers who are alive today would have died before final victory was achieved.

The story of our success is a story of teamwork. The combined efforts of science, management, labor and the armed forces produced the atomic bomb. Now it is up to us to turn this discovery into a bulwark of the peace it helped to win.

No single department of government should be charged with a responsibility that affects the whole future of mankind so directly and so immediately. Even the winning of a war seems a minor matter by comparison with the importance of applying fully and controlling wisely the power of the atom.

If we misapply the knowledge we now have or fail to carry forward our research with the utmost vigor, we may be passing a sentence of death on the future of our own country and the entire world.

The bill that is before your Committee today reflects the views of the men who were most responsible for the wartime development of atomic energy as to the most effective method for controlling and carrying forward development in this field within the United States. It embodies all the points on domestic policy recommended by the President in his message to the Congress last week.

The manner in which this legislation was prepared will be of interest to you. In May of this year, two months before the test in New Mexico showed conclusively that the atomic bomb would work, Secretary Stimson, with the approval of the President, appointed an Interim Committee to recommend legislation that would insure that this discovery would be controlled and developed in the best interests of the people of this country.

MORE

1-B

Secretary Stimson served as Chairman of the Committee, with George L. Harrison, former chairman of the Federal Reserve Bank of New York and present president of the New York Life Insurance Company, as his alternate. The other members of the Committee were:

- Secretary James F. Byrnes, then a private citizen
- Ralph A. Bard, Under Secretary of the Navy
- William L. Clayton, Assistant Secretary of State
- Dr. Vannevar 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, President of the Massachusetts Institute of Technology, and Chief of the Office of Field Service in the Office of Scientific Research and Development.

General Groves was present in an advisory capacity at all meetings of the committee. The members were also aided by the advice and experience of eminent scientists who had rendered invaluable service in the atomic bomb project, Dr. J. R. Oppenheimer, Dr. E. O. Lawrence, Dr. Enrico Fermi and Dr. Arthur H. Compton. Representative industrialists who had taken a prominent part in the project also assisted the committee in its work.

The drafting of the bill, in line with the principles and policies established by the committee, was done by Brigadier General Kenneth C. Royall and Mr. William L. Marbury, both of whom have frequently appeared before your committee and who are present this morning to answer any questions you may have as to the details of the bill.

When the Interim Committee had reached unanimous agreement on the scope and language of the proposed legislation, it was submitted to interested government agencies, including the Department of State, the Department of the Interior and the Department of Justice. With one or two minor exceptions, the revisions suggested by these departments were incorporated into the bill.

In the opinion of the Interim Committee, the legislation you now have is the soundest and most comprehensive that could be drawn to cover all those phases of domestic control of atomic energy that require action in the interest of national security, world peace and the promotion of human welfare. The final draft was reviewed by the President before its transmittal to Congress.

There has been distributed to the members of your Committee a summary of this bill. You will note that the essential provisions are these:

The first section declares that all activities connected with the release of atomic energy shall be conducted in the interest of the nation and world peace, so as to promote the national defense, protect the safety of our inhabitants, safeguard world peace, and further the acquisition of knowledge in this field.

Jurisdiction is vested in an Atomic Energy Commission of nine members appointed by the President, with the advice and consent of the Senate, to serve for nine years. Members of the Commission are not expected to devote their full time to the work of the Commission, but the Commission will exercise general supervision over all atomic energy activities. For the actual day-to-day administration of the Act, there is provided a full-time Administrator and Deputy Administrator. To aid these officials, the President is empowered to establish and appoint the Advisory Boards he believes proper. The bill grants to the Commission the full general powers necessary to the performance of its functions, such as the right to adopt regulations, to acquire property by purchase or eminent domain, to make contracts, and to create corporations. With certain exceptions, similar general powers are conferred upon the Administrator.

All items of Government-owned property relating to the production of atomic energy, including the plants and other property of the Manhattan Engineer District, are transferred to the Commission. All rights in substances found in

Dr. Vannevar 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, President of the Massachusetts Institute of Technology, and Chief of the Office of Field Service in the Office of Scientific Research and Development.

General Groves was present in an advisory capacity at all meetings of the committee. The members were also aided by the advice and experience of eminent scientists who had rendered invaluable service in the atomic bomb project, Dr. J. R. Oppenheimer, Dr. E. O. Lawrence, Dr. Enrico Fermi and Dr. Arthur H. Compton. Representative industrialists who had taken a prominent part in the project also assisted the committee in its work.

The drafting of the bill, in line with the principles and policies established by the committee, was done by Brigadier General Kenneth C. Royall and Mr. William L. Marbury, both of whom have frequently appeared before your committee and who are present this morning to answer any questions you may have as to the details of the bill.

When the Interim Committee had reached unanimous agreement on the scope and language of the proposed legislation, it was submitted to interested government agencies, including the Department of State, the Department of the Interior and the Department of Justice. With one or two minor exceptions, the revisions suggested by these departments were incorporated into the bill.

In the opinion of the Interim Committee, the legislation you now have is the soundest and most comprehensive that could be drawn to cover all those phases of domestic control of atomic energy that require action in the interest of national security, world peace and the promotion of human welfare. The final draft was reviewed by the President before its transmittal to Congress.

There has been distributed to the members of your Committee a summary of this bill. You will note that the essential provisions are these:

The first section declares that all activities connected with the release of atomic energy shall be conducted in the interest of the nation and world peace, so as to promote the national defense, protect the safety of our inhabitants, safeguard world peace, and further the acquisition of knowledge in this field.

Jurisdiction is vested in an Atomic Energy Commission of nine members appointed by the President, with the advice and consent of the Senate, to serve for nine years. Members of the Commission are not expected to devote their full time to the work of the Commission, but the Commission will exercise general supervision over all atomic energy activities. For the actual day-to-day administration of the Act, there is provided a full-time Administrator and Deputy Administrator. To aid these officials, the President is empowered to establish and appoint the Advisory Boards he believes proper. The bill grants to the Commission the full general powers necessary to the performance of its functions, such as the right to adopt regulations, to acquire property by purchase or eminent domain, to make contracts, and to create corporations. With certain exceptions, similar general powers are conferred upon the Administrator.

All items of Government-owned property relating to the production of atomic energy, including the plants and other property of the Manhattan Engineer District, are transferred to the Commission. All rights in substances found in Government-owned lands which are directly connected with the release of atomic power are forever vested in the United States, and such lands or deposits are

MORE

2B

to be turned over to the Commission at its request. The Commission is also authorized to require private persons to declare any property now or hereafter determined to be directly connected with atomic energy, and to acquire such property, at a fair price, by purchase or eminent domain.

With the property thus coming into its custody, the Commission is empowered, through its own employees or through contractors, to conduct all necessary research and experimentation in this field, to develop processes for the release of atomic energy and for its use for military, industrial, scientific or medical purposes. To this end, the Administrator may license or dispose of the Commission's property to other Government agencies or private persons, upon appropriate terms and conditions.

As a necessary corollary to the power of supervision which comes to the Commission through its jurisdiction over Government property, the bill also grants to the Commission full control over the use, processing, export, and import, by private persons, of all substances determined to be sources of or directly connected with atomic energy.

In the licensing of its property and the control of private activities, the bill expressly imposes upon the Commission the policy of minimum interference with and encouragement of private research and of maximum employment of other Government agencies, educational institutions, and private enterprise. The Commission is also enjoined to encourage the widespread distribution, so far as feasible, of permission to engage in activities subject to its jurisdiction, and to discourage the growth of monopoly in trades and industries affected by these activities.

The proposed legislation also authorizes the Commission to adopt and administer the necessary security regulations, and provides suitably strict penalties for their violation. Penalties for violation of the other provisions of the Act and the regulations of the Commission are also established.

The question of international control or interchange of information concerning atomic energy is not determined by this legislation. In his message the President drew a clear line between the domestic phase and the international phase of this problem. This bill concerns itself with the domestic phase. Under Section 11a, the Atomic Energy Commission would be specifically prohibited from granting any information or rights to foreign nations without the express approval of the President. In all its activities the Commission would function under the basic principles laid down by Congress in the bill.

Logic demands that we set our domestic house in order, so far as the development of atomic energy is concerned, before we enter into discussions or reach decisions as to what should be done in the international field. What we need now is a body under legislative authority to take possession of the resources we have, to acquire other resources, and to administer them in such a way that the United States will leave nothing undone in furtherance of knowledge and application in this field.

By establishing a Commission of nine members to be selected by the President with the advice and consent of the Senate, you will take the first step toward the determination of a sound permanent policy for the research and manufacturing organization that was built up under the stress of war.

It is the thought of those who participated in the drafting of this legislation that the citizens designated to serve on the Commission, as well as the Administrator and his Deputy, would be representative of all that is best in our national life - men of demonstrated wisdom and judgment who would accept appointment not because of any emoluments that might attend their membership but rather because of a profound recognition of the significance of atomic power to the future of civilization.

There are many important decisions that must be made in the immediate future notably those involving the further operation of the Manhattan District project. We now have three enormous manufacturing plants in operation, as well as many smaller ones, and we have built up a well-integrated and irreplaceable organipurposes. To this end, the Administrator may license or dispose of the Commission's property to other Government agencies or private persons, upon appropriate terms and conditions.

As a necessary corollary to the power of supervision which comes to the Commission through its jurisdiction over Government property, the bill also grants to the Commission full control over the use, processing, export, and import, by private persons, of all substances determined to be sources of or directly connected with atomic energy.

In the licensing of its property and the control of private activities, the bill expressly imposes upon the Commission the policy of minimum interference with and encouragement of private research and of maximum employment of other Government agencies, educational institutions, and private enterprise. The Commission is also enjoined to encourage the widespread distribution, so far as feasible, of permission to engage in activities subject to its jurisdiction, and to discourage the growth of monopoly in trades and industries affected by these activities.

The proposed legislation also authorizes the Commission to adopt and administer the necessary security regulations, and provides suitably strict penalties for their violation. Penalties for violation of the other provisions of the Act and the regulations of the Commission are also established.

The question of international control or interchange of information concerning atomic energy is not determined by this legislation. In his message the President drew a clear line between the domestic phase and the international phase of this problem. This bill concerns itself with the domestic phase. Under Section 11a, the Atomic Energy Commission would be specifically prohibited from granting any information or rights to foreign nations without the express approval of the President. In all its activities the Commission would function under the basic principles laid down by Congress in the bill.

Logic demands that we set our domestic house in order, so far as the development of atomic energy is concerned, before we enter into discussions or reach decisions as to what should be done in the international field. What we need now is a body under legislative authority to take possession of the resources we have, to acquire other resources, and to administer them in such a way that the United States will leave nothing undone in furtherance of knowledge and application in this field.

By establishing a Commission of nine members to be selected by the President with the advice and consent of the Senate, you will take the first step toward the determination of a sound permanent policy for the research and manufacturing organization that was built up under the stress of war.

It is the thought of those who participated in the drafting of this legislation that the citizens designated to serve on the Commission, as well as the Administrator and his Deputy, would be representative of all that is best in our national life - men of demonstrated wisdom and judgment who would accept appointment not because of any emoluments that might attend their membership but rather because of a profound recognition of the significance of atomic power to the future of civilization.

There are many important decisions that must be made in the immediate future notably those involving the further operation of the Manhattan District project. We now have three enormous manufacturing plants in operation, as well as many smaller ones, and we have built up a well-integrated and irreplaceable organization of scientists, executives, engineers and skilled workers. To allow this organization to disintegrate because of uncertainty concerning future national policy would be a national disaster. Some of our most valuable people have already left, and more will go unless prompt action is taken to clarify the situation affecting their future.

MORE

No one, not even the scientists most familiar with what has already been achieved, can foresee the ultimate fields into which atomic research will lead. At present, however, there are three great fields that call for our utmost in the way of research and reduction to practice:

(1) The development of atomic energy as a controlled source of power, to make available heat and power in supplement to existing sources and also as a means to new developments;

(2) The application of atomic energy to weapons, subject to international arrangements that may be later made;

(3) The application of activities characteristic of this field to the growth of the sciences and the practical arts, particularly of medicine, chemistry and physics.

None of these developments will come overnight or without the most intensive research. The prompt passage of this bill is bound to accelerate our progress along these lines and so to promote the national welfare and safety.

The War Department has taken the initiative in proposing that it be divested of the great authority that goes with the control of atomic energy, because it recognizes that the problems we now face go far beyond the purely military sphere.

The atomic bomb is the most devasting weapon we know, but the means of releasing atomic energy which it employs may prove to be the greatest boon to mankind in the world's history. The wisest minds in our nation will be required to administer this discovery for the benefit of all of us.

END

STATEMENT OF DR. J. R. OPPENHEIMER October 18, 1945

The Chairman. Will you tell us something about your qualifications, your experience, and your connection with the subject embraced in this bill?

Dr. Oppenheimer. I have practically no qualifications, Mr. Chairman. I am a physicist who taught in California, in Berkeley and in Pasadena, before the war. In 1941 I became interested in the possibility of making atomic weapons, and since the inception of the laboratory at Los Alamos I have been its director. So I know a little bit about the making of bombs.

The Chairman. You may proceed with your statement, Doctor.

Dr. Oppenheimer. I have very little to add to the testimony which Dr. Compton has given and which has come out in the questions which the members of the committee have asked. But I think I may owe an explanation to the committee of the telegram which I sent the Secretary of War in conjunction with Dr. Lawrence and Mr. Fermi in which we urged the prompt passage of this legislation.

In the first place, there are two reasons why we would like to see legislation passed soon. One I might illustrate in the following way:

There are many things that ought to be done with atomic energy in a military and industrial and scientific way which are not being done now. One of them is a very small example. There are some people in Southern California who would like to use the radiations from a small power unit to study biological problems to try to understand certain diseases and to try to find a cure for those diseases. They are not able to operate, not only because they have not the material with which to work, but because all of the information involved in the fications, your experience, and your connection with the subject embraced in this bill?

Dr. Oppenheimer. I have practically no qualifications, Mr. Chairman. I am a physicist who taught in California, in Berkeley and in Pasadena, before the war. In 1941 I became interested in the possibility of making atomic weapons, and since the inception of the laboratory at Los Alamos I have been its director. So I know a little bit about the making of bombs.

The Chairman. You may proceed with your statement, Doctor.

Dr. Oppenheimer. I have very little to add to the testimony which Dr. Compton has given and which has come out in the questions which the members of the committee have asked. But I think I may owe an explanation to the committee of the telegram which I sent the Secretary of War in conjunction with Dr. Lawrence and Mr. Fermi in which we urged the prompt passage of this legislation.

In the first place, there are two reasons why we would like to see legislation passed soon. One I might illustrate in the following way:

There are many things that ought to be done with atomic energy in a military and industrial and scientific way which are not being done now. One of them is a very small example. There are some people in Southern California who would like to use the radiations from a small power unit to study biological problems to try to understand certain diseases and to try to find a cure for those diseases. They are not able to operate, not only because they have not the material with which to work, but because all of the information involved in the building of this particular unit is tied up under absolute secrecy at Los Alamos.

1-B

It is not, in my opinion, reasonable to ask the War Department to make fundamental decisions of policy on how such information should be handled. I do not think that the War Department is at present making such decisions, and information which might save lives and suffering is not being obtained because there is no authority to run the project. This is only one small example, but it is a true one.

The second reason is this. My own belief-- and I think in this I speak for all scientists, or almost all scientists-- is that the greatest possible future safety of this nation against atomic weapons will rest in international control of atomic weapons. This is almost a negative statement. I believe that the people who have the responsibility for negotiation would prefer to do so with a satisfactory national organization. I have been assured of this, and I think it is true.

In addition to that, I would say a word or two about the bill. I did not have anything to do with the drafting of the bill, and I am not competent to judge of its adequacy.

It is certainly a bill which does not establish policy; it establishes a framework within which the policy agreed on by the Congress, by the American people, and expressed by the President, may be executed.

I share the confidence that the Chairman has expressed in the ability of this nation, in a matter of such great importance, to find nine reasonably intelligent and conscientious men to carry out whatever policy the country decides is right. I share his confidence that an administrator can be found who will carry out these policies in practice. No one that I have talked to would claim that the May bill makes it impossible to operate properly the many complicated and potentially dangerous elements in this project. The most that people

Department to make fundamental decisions of policy on how such information should be handled. I do not think that the War Department is at present making such decisions, and information which might save lives and suffering is not being obtained because there is no authority to run the project. This is only one small example, but it is a true one.

The second reason is this. My own belief-- and I think in this I speak for all scientists, or almost all scientists-- is that the greatest possible future safety of this nation against atomic weapons will rest in international control of atomic weapons. This is almost a negative statement. I believe that the people who have the responsibility for negotiation would prefer to do so with a satisfactory national organization. I have been assured of this, and I think it is true.

In addition to that, I would say a word or two about the bill. I did not have anything to do with the drafting of the bill, and I am not competent to judge of its adequacy.

It is certainly a bill which does not establish policy; it establishes a framework within which the policy agreed on by the Congress, by the American people, and expressed by the President, may be executed.

I share the confidence that the Chairman has expressed in the ability of this nation, in a matter of such great importance, to find nine reasonably intelligent and conscientious men to carry out whatever policy the country decides is right. I share his confidence that an administrator can be found who will carry out these policies in practice. No one that I have talked to would claim that the May bill makes it impossible to operate properly the many complicated and potentially dangerous elements in this project. The most that people claim is that it is not written into the bill just how these policies are to be formulated and how they are to be carried out.

In that connection I have one thing to add. The bill was drafted with the detailed supervision of Dr. Bush and Dr. Conant, with the knowledge and the agreement of the former Secretary of War, Mr. Stimson. I think that no one in the country carried a greater weight of responsibility for this project than Mr. Stimson. I think no men in positions of responsibility, who were scientists, took more responsibility or were more courageous or better informed in the general sense than Dr. Bush and Dr. Conant. I think if they liked the philosophy of this bill and urged this bill it is a very strong argument. I know that many scientists do not agree with me on this, but I am nevertheless convinced myself.

I would go one step further. It would in some ways be desirable to have a bill in which the powers of the Commission were much more carefully defined than they are in the May bill. I think that has not been done, for a good reason. It has not been done, because the subject is not only very important; it is very new. I think if we had tried to write a bill on atomic energy in 1941 every one would have agreed that you could not do it, that the subject was not yet old enough. It is my conviction that the subject is still not old enough to write a bill under which operations can continue with the rapidly changing technical situation. Even if we forgot the matters of policy connected with industrial exploitation, the matters of policy connected with international relations, the dangers of war and the possibilities of further war, we would still have the fact that even the science in which this policies are to be formulated and how they are to be carried out.

In that connection I have one thing to add. The bill was drafted with the detailed supervision of Dr. Bush and Dr. Conant, with the knowledge and the agreement of the former Secretary of War, Mr. Stimson. I think that no one in the country carried a greater weight of responsibility for this project than Mr. Stimson. I think no men in positions of responsibility, who were scientists, took more responsibility or were more courageous or better informed in the general sense than Dr. Bush and Dr. Conant. I think if they liked the philosophy of this bill and urged this bill it is a very strong argument. I know that many scientists do not agree with me on this, but I am nevertheless convinced myself.

I would go one step further. It would in some ways be desirable to have a bill in which the powers of the Commission were much more carefully defined than they are in the May bill. I think that has not been done, for a good reason. It has not been done, because the subject is not only very important; it is very new. I think if we had tried to write a bill on atomic energy in 1941 every one would have agreed that you could not do it, that the subject was not yet old enough. It is my conviction that the subject is still not old enough to write a bill under which operations can continue with the rapidly changing technical situation. Even if we forgot the matters of policy connected with industrial exploitation, the matters of policy connected with international relations, the dangers of war and the possibilities of further war, we would still have the fact that even the science in which this is working is changing from day to day; and I hope it will change very much in the next ten years, because it is in these changes that our real progress lies. And many, at least

Dr. Bush and Dr. Conant, were very much impressed by the rapidity with which they had seen ideas change, by the rapidity with which they had seen new possibilities brought in. They would have found it unwise to write specific directives, such as control of this ~~firm~~ (material) and no control of this; let this experiment be done, but not this one; let this industry be uncontrolled and that industry be controlled—because ~~we~~ they did not know, and I am sure I don't know, how to set these limits. I think, therefore, it is fair to say that the May bill has been written largely from the point of view that we must have confidence in the Commission; we must have confidence in the government of this country. We are not in position to write detailed directives that will be binding for any reasonable period in the future. With the understanding that as the issues become clear it is appropriate to reconsider the legislation, that it is appropriate not to regard it as a scheme for all eternity, but as a measure which for the moment is the best that we could do. In that sense I think it should be supported.

I want to say one thing purely as a representative of scientists.

Scientists are not used to being controlled; they are not used to regimentation, and there are good reasons why they should be averse to it, because it is in the nature of science that the individual is to be given a certain amount of freedom to invent, to think, and to carry on the best he knows how. Most of the scientists with whom I have talked would like the assurances which are now in the bill, somewhat reinforced, about the intention of the Congress to direct the Commission not to interfere with scientific work except when there is a national hazard involved. This could not be said very much more strongly, but I think there are a few words that might be rapidity with which they had seen new possibilities brought in. **They would have found it unwise to write specific directives,** such as control of this ~~firm~~ (material) and no control of this; let this experiment be done, but not this one; let this industry be uncontrolled and that industry be controlled—because ~~we~~ they did not know, and I am sure I don't know, how to set these limits. I think, therefore, it is fair to say that the May bill has been written largely from the point of view that we must have confidence in the Commission; we must have confidence in the government of this country. We are not in position to write detailed directives that will be binding for any reasonable period in the future. With the understanding that as the issues become clear it is appropriate to reconsider the legislation, that it is appropriate not to regard it as a scheme for all eternity, but as a measure which for the moment is the best that we could do. In that sense I think it should be supported.

I want to say one thing purely as a representative of scientists.

Scientists are not used to being controlled; they are not used to regimentation, and there are good reasons why they should be averse to it, because it is in the nature of science that the individual is to be given a certain amount of freedom to invent, to think, and to carry on the best he knows how. Most of the scientists with whom I have talked would like the assurances which are now in the bill, somewhat reinforced, about the intention of the Congress to direct the Commission not to interfere with scientific work except when there is a national hazard involved. This could not be said very much more strongly, but I think there are a few words that might be said, that the Commission should in no way interfere with or control research except in so far as the national safety and the national security are involved.

I believe that the War Department would be glad to support such amendments, and I believe it would do a great deal of good in reassuring the academic scientists of the country if such amendments were written in. There may be others. I do not want to go into details.

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

October 20, 1945

MEMORANDUM FOR THE PRESS:

Secretary of War Robert P. Patterson today issued the following statement:

"Public discussion of great issues such as the dissemination and regulation of knowledge of atomic science is one of the basic principles on which democratic government is founded. In it all citizens have a right to participate. American scientists in particular, because of their knowledge of the technical matters involved and because of their comprehension of the full social significance of the achievement, can contribute powerfully to it. Security, of course, still requires that nothing beyond the specific subject matter contained in the Smyth Report be brought into discussion, and the use of due care that matters outside the content of this report and still under security regulations be not inadvertently encroached upon. With this sole restriction, however, which applies to all citizens, our scientists should feel that it is proper for them as citizens to join actively in public consideration of this question."

END

DISTRIBUTION: N, Y.
12:00 PM

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

October 30, 1945

I M M E D I A T E R E L E A S E

DEPUTY DIRECTOR OF ATOMIC BOMB PROJECT
AWARDED DISTINGUISHED SERVICE MEDAL

Brigadier General Thomas F. Farrell, Deputy to the Commanding General, Manhattan Engineer District, has been awarded a Distinguished Service Medal for his work in connection with the development and use of the atomic bomb, it was announced today by the War Department.

The medal was presented to General Farrell by Major General Thomas M. Robins, Deputy Chief of Engineers. Major General Leslie R. Groves, Commanding Officer, Manhattan Engineer District, read the citation.

The citation reads as follows:

"Brigadier General Thomas F. Farrell, serving as Deputy to the Commanding General, Manhattan Engineer District, from February 1 to August 7, 1945, rendered distinguished and meritorious service in connection with the development and use of the greatest military weapon of all time, the Atomic Bomb. His position entailed heavy and varied responsibilities for the coordination and integration of many of the activities of the Atomic Bomb Project. With exceptional executive and administrative ability, great foresight, initiative and resourcefulness, he effectively dealt with matters of grave importance and contributed significantly to the success of the program. General Farrell's accomplishments reflect great credit upon himself and upon the military service."

General Farrell maintains his home at 10 Holmes Dale Avenue, Albany, New York.

END

DISTRIBUTION: N, Y, Citations.
5:15 P.M.

14/11/45

STATEMENT TO THE PRESS BY THE SECRETARY OF WAR
CONCERNING THE MAY-JOHNSON ATOMIC ENERGY BILL
(H.R. 4566)

The May-Johnson Atomic Energy Bill (H.R. 4566) was reported out, with amendments, by the House Military Affairs Committee on November 5th. In sponsoring this bill the War Department is seeking to divest itself of the power it now has in directing atomic energy research and to place power in the hands of a separate agency. It is important that the new agency be established as soon as possible, in order to secure a broad-gauged handling of atomic energy for the benefit of the nation as a whole and in order to integrate our present plant, experience, and scientific talent into this broader management before these assets are lost. It is with the thought that I may be able to clear up certain misunderstandings which may delay progress on this important measure that I make this statement.

Two main contentions have been made by critics of this bill. First, it is charged that the bill is intended to stifle freedom of scientific research. Second it is charged that the bill is "militaristic" and that the War Department is trying to retain control over atomic energy.

I. ORIGIN OF THE BILL

The War Department called in outstanding advisors from science, industry and public life to draft this measure. Their views were reflected in the bill that was introduced. The names of these advisors should dispel the notion that the bill was devised as an effort to continue military control.

Secretary Stimson, early in May, two months before the success of the atomic bomb was assured, appointed an Interim Committee to make recommendations on postwar control and development of atomic energy and to draft appropriate legislation. The members were:

Secretary Stimson, Chairman;
George L. Harrison, Alternate Chairman; President of the New York Life Insurance Company;
James F. Byrnes, Secretary of State, personal representative of the President of the Committee;
Ralph A. Bard, Under Secretary of the Navy;
William L. Clayton, Assistant Secretary of State;
Dr. Vannevar Bush, Director of the Office of Scientific Research and Development, President of the Carnegie Institution of Washington;
Dr. James B. Conant, Chairman of the National Defense Research Committee, President of Harvard University;
Dr. Karl T. Compton, Chief of the Field Service, Office of Scientific Research and Development, President of the Massachusetts Institute of Technology.

In order to broaden its understanding of the scientific and technical matters involved, the Committee established a Scientific Panel and also obtained the advice of the leading industrialists who had participated in the manufacture of the atomic bomb. The Scientific Panel was selected from the leading scientists who had been most active in the project and was composed of:

Dr. J. R. Oppenheimer,
Dr. E. O. Lawrence,
Dr. A. H. Compton,
Dr. Enrico Fermi.

After the Committee had given thorough consideration to these points of view and had determined the broad policies that should be embodied in legislation, Brigadier General Kenneth C. Royall (now Under Secretary of War) and William L. Marbury, a lawyer then serving in the War Department, were requested to prepare an initial draft of a bill. When the bill had gone through many drafts and was approaching final form, it was discussed with representatives of the Departments of State, Interior, and Justice. With minor exceptions, suggestions made by these Departments

1-A

directing atomic energy research and to place power in the hands of a separate agency. It is important that the new agency be established as soon as possible, in order to secure a broad-gauged handling of atomic energy for the benefit of the nation as a whole and in order to integrate our present plant, experience, and scientific talent into this broader management before these assets are lost. It is with the thought that I may be able to clear up certain misunderstandings which may delay progress on this important measure that I make this statement.

Two main contentions have been made by critics of this bill. First, it is charged that the bill is intended to stifle freedom of scientific research. Second it is charged that the bill is "militaristic" and that the War Department is trying to retain control over atomic energy.

I. ORIGIN OF THE BILL

The War Department called in outstanding advisors from science, industry and public life to draft this measure. Their views were reflected in the bill that was introduced. The names of these advisors should dispel the notion that the bill was devised as an effort to continue military control.

Secretary Stimson, early in May, two months before the success of the atomic bomb was assured, appointed an Interim Committee to make recommendations on postwar control and development of atomic energy and to draft appropriate legislation. The members were:

- Secretary Stimson, Chairman;
- George L. Harrison, Alternate Chairman; President of the New York Life Insurance Company;
- James F. Byrnes, Secretary of State, personal representative of the President of the Committee;
- Ralph A. Bard, Under Secretary of the Navy;
- William L. Clayton, Assistant Secretary of State;
- Dr. Vannevar Bush, Director of the Office of Scientific Research and Development, President of the Carnegie Institution of Washington;
- Dr. James B. Conant, Chairman of the National Defense Research Committee, President of Harvard University;
- Dr. Karl T. Compton, Chief of the Field Service, Office of Scientific Research and Development, President of the Massachusetts Institute of Technology.

In order to broaden its understanding of the scientific and technical matters involved, the Committee established a Scientific Panel and also obtained the advice of the leading industrialists who had participated in the manufacture of the atomic bomb. The Scientific Panel was selected from the leading scientists who had been most active in the project and was composed of:

- Dr. J. R. Oppenheimer,
- Dr. E. O. Lawrence,
- Dr. A. H. Compton,
- Dr. Enrico Fermi.

After the Committee had given thorough consideration to these points of view and had determined the broad policies that should be embodied in legislation, Brigadier General Kenneth C. Royall (now Under Secretary of War) and William L. Marbury, a lawyer then serving in the War Department, were requested to prepare an initial draft of a bill. When the bill had gone through many drafts and was approaching final form, it was discussed with representatives of the Departments of State, Interior, and Justice. With minor exceptions, suggestions made by these Departments were incorporated into the bill.

L MORE

1-B

II. POLICY TOWARD SCIENCE

This legislation seeks to solve the fundamental problems of securing central direction and control of the development of this new source of energy for the benefit of the nation as a whole, and at the same time insuring that our scientific knowledge and the enthusiasm of scientists for work in this new field and related fields will be fostered and developed. It was concluded that the extraordinary possibilities of the development of atomic energy, either for the great benefit or great harm of the world, called for extensive measures of control. The underlying premise therefore of the bill is that a managing agency should be vested with control. It is to be borne in mind that two billion dollars of public funds have been invested in this project. The second and equally important premise is that freedom of science, of research and inquiry, must be fostered to the maximum extent.

Original Provisions

The bill provided that all activities connected with the release of atomic energy should be conducted in the national interest, so as to promote the national defense, protect the safety of our inhabitants, safeguard world peace, and extend acquisition of knowledge in this field primarily for civilian use. Control was vested in an Atomic Energy Commission of nine members to be appointed by the President, with the advice and consent of the Senate; the Commission was to exercise supervision over all atomic energy activities.

The bill stated that one of its primary objectives was "the furtherance of the acquisition of knowledge concerning atomic energy," and contained the following provisions:

Sec. 3 (a) "In the conduct of its activities, the Commission shall adopt a policy of minimum interference with private research and of employing other Government agencies, educational and research institutions, and private enterprise to the maximum extent consistent with the accomplishment of the objectives of this Act."

Sec. 13 (a)... "it shall be the policy of the Commission and of the Administrator, in accord with the objectives of this Act, to utilize, encourage, and aid colleges, universities, scientific laboratories, hospitals, and other governmental, non-profit, or private institutions equipped and staffed to conduct research and experimentation in this field."

Sec. 13 (d)... "In administering this (Act) the Commission and the Administrator shall interfere to the least possible extent with small-scale experimentation in research laboratories of non-profit institutions."

These sections were considered by the Interim Committee to be adequate safeguards against unwarranted interference by the Commission with private research.

Amendments

In the course of hearings before the House Military Affairs Committee, certain scientists, in spite of the protective provisions I have just read, expressed concern that freedom of research and investigation might be seriously impaired by the Commission. War Department representatives met with a number of eminent scientists and with them prepared amendments clarifying on these points.

These amendments limit more clearly the control of the Commission over the field of atomic energy by providing (as for example in Section 13 (d) that... "Nothing in this section or in section 17 (3) shall prohibit or shall subject to the jurisdiction of the Commission or the administrator, the conducting or disclosure by private persons of research in the field of nuclear energy, or in other fields employing the results or methods of research in that field, unless the release of actual amounts of atomic energy involved in such research constitutes a national hazard or is of military or industrial value." These amendments also provide that the Commission shall adopt a policy of... "full encouragement of free research in the field of nuclear energy, and in other fields employing the results possibilities of the development of atomic energy, either for the great benefit or great harm of the world, called for extensive measures of control. The underlying premise therefore of the bill is that a managing agency should be vested with control. It is to be borne in mind that two billion dollars of public funds have been invested in this project. The second and equally important premise is that freedom of science, of research and inquiry, must be fostered to the maximum extent.

Original Provisions

The bill provided that all activities connected with the release of atomic energy should be conducted in the national interest, so as to promote the national defense, protect the safety of our inhabitants, safeguard world peace, and extend acquisition of knowledge in this field primarily for civilian use. Control was vested in an Atomic Energy Commission of nine members to be appointed by the President, with the advice and consent of the Senate; the Commission was to exercise supervision over all atomic energy activities.

The bill stated that one of its primary objectives was "the furtherance of the acquisition of knowledge concerning atomic energy," and contained the following provisions:

Sec. 3 (a) "In the conduct of its activities, the Commission shall adopt a policy of minimum interference with private research and of employing other Government agencies, educational and research institutions, and private enterprise to the maximum extent consistent with the accomplishment of the objectives of this Act."

Sec. 13 (a)... "it shall be the policy of the Commission and of the Administrator, in accord with the objectives of this Act, to utilize, encourage, and aid colleges, universities, scientific laboratories, hospitals, and other governmental, non-profit, or private institutions equipped and staffed to conduct research and experimentation in this field."

Sec. 13 (d)... "In administering this (Act) the Commission and the Administrator shall interfere to the least possible extent with small-scale experimentation in research laboratories of non-profit institutions."

These sections were considered by the Interim Committee to be adequate safeguards against unwarranted interference by the Commission with private research.

Amendments

In the course of hearings before the House Military Affairs Committee, certain scientists, in spite of the protective provisions I have just read, expressed concern that freedom of research and investigation might be seriously impaired by the Commission. War Department representatives met with a number of eminent scientists and with them prepared amendments clarifying on these points.

These amendments limit more clearly the control of the Commission over the field of atomic energy by providing (as for example in Section 13 (d) that.... "Nothing in this section or in section 17 (3) shall prohibit or shall subject to the jurisdiction of the Commission or the administrator, the conducting or disclosure by private persons of research in the field of nuclear energy, or in other fields employing the results or methods of research in that field, unless the release of actual amounts of atomic energy involved in such research constitutes a national hazard or is of military or industrial value." These amendments also provide that the Commission shall adopt a policy of.... "full encouragement of free research in the field of nuclear energy, and in other fields employing the results of methods of research in that field, together with the furtherance of the practical application of such research."

MORE

2-B

These changes enunciate more clearly and emphasize more strongly the policy of non-interference with fundamental research and experimentation as carried on by scientists in this and other fields in private laboratories. The policy expressed in the bill is to encourage free research in this and related fields in the interests of widening and deepening scientific knowledge.

The War Department believes that t ese amendments should meet the objections of scientists who have voiced concern based on the fear of interference with research and inquiry in the fundamental sciences. The War Department offered these amendments to the House Military Affairs Committee. The Committee has seen fit to incorporate them into the bill.

III. POLICY TOWARD CONTROL

It has been contended by some that the War Department in sponsoring this legislation is attempting to retain control over this field for purely military purposes. I repeat the statement I made before the House Military Affairs Committee on October 9:

"The War Department has taken the initiative in proposing that it be divested of the great authority that goes with the control of atomic energy, because it recognizes that the problems we now face go far beyond the purely military sphere.

"The Atomic bomb is the most devastating weapon we know, but the means of releasing atomic energy which it employs may prove to be the greatest boon to mankind in the world's history. The wisest minds in our nation will be required to administer this discovery for the benefit of all of us."

We initiated action to divest ourselves of control; we followed the recommendations of a committee composed entirely of civilians in preparing legislation; we consulted with and in the main adopted the suggestions of interested civilian agencies of government. The final and complete answer to the charge of "militarism" is that the bill provides that control be turned over to a commission of nine appointed by the President and approved by the Senate. Under the commission is an administrator appointed by the commission.

IV. INTERNATIONAL MATTERS

The question of what is done by way of international arrangements in this field is not involved in the passage of this domestic bill. As you know, discussion on international arrangements are now under way at the White House.

END

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E   R E L E A S E

FOR RELEASE IN MORNING PAPERS, 26 NOVEMBER 1945.

54 OFFICERS RECEIVE AWARDS FOR WORK ON ATOMIC BOMB PROJECT

Fifty-four officers of the United States Army have thus far been awarded the Distinguished Service Medal, the Legion of Merit, or an Oak Leaf Cluster in lieu of a second medal, for their contributions to the success of the atomic bomb project, the War Department announced today.

Awards of the Distinguished Service Medal to Major General Leslie Richard Groves, who as commanding general of the Manhattan Engineer District was head of the entire project (date of release: September 12, 1945), and to Brigadier General Thomas F. Farrell, who was deputy to the commanding general (date of release: October 30, 1945), were announced previously. The following awards were announced today.

DISTINGUISHED SERVICE MEDAL

TO: FRANKLIN T. MATTHIAS, Colonel, U. S. Army, 214 Rennoc Rd., Fountain City, Ten
FOR: As Area Engineer, Hanford Engineer Works, Manhattan Engineer District, from February, 1943, to August, 1945, he performed distinguished services in connection with the development of the Atomic Bomb. He bore the responsibility for the expeditious construction of plant areas and housing facilities necessary to this undertaking. His success in procuring the necessary manpower, his tact and diplomacy in establishing harmonious relationships between management and labor, his ability in formulating and administering sound security and secrecy restrictions, and his resourcefulness in surmounting unforeseen obstacles even beyond those inherent in construction projects were decisive factors in the production of the basic materials used in the Atomic Bomb.

TO: KENNETH D. NICHOLS, Colonel, U. S. Army, 4030 Rocky River Dr., Cleveland, Ohio.
FOR: As District Engineer, Manhattan Engineer District, from August, 1943, to August, 1945, he distinguished himself while performing duties in connection with the development of the Atomic Bomb. Overcoming many and varied difficulties, he perfected the organization of diverse elements and installations and by his outstanding knowledge determined procedures for the most effective utilization of all components, thus creating a secure and efficient team to carry out a work of unparalleled magnitude and complexity.

TO: STAFFORD L. WARREN, Colonel, U. S. Army, Box 287, Crittenden Sta., Rochester, N. Y.
FOR: As Chief of the Medical Section, Manhattan Engineer District, from November, 1943, to August, 1945, he performed exceptionally meritorious and distinguished service in connection with the development of the Atomic Bomb. He was charged with the grave responsibility of safeguarding and maintaining at a high level the health and welfare of all personnel engaged in a new field of endeavor. His inspiring leadership, initiative and resourcefulness, his farsighted vision and perseverance, his professional knowledge and skill, and his unswerving devotion to his task contributed significantly to the attainment of successful results.

OAK LEAF CLUSTER TO LEGION OF MERIT

TO: ELMER E. KIRKPATRICK, JR., Colonel, U. S. Army, 501 W. 13th St., Oklahoma City, Okla.
FOR: As Special Assistant to the Commanding General, and as Deputy District Engineer, Manhattan Engineer District, from September, 1944, to August, 1945, he

FOR RELEASE IN MORNING PAPERS, 26 NOVEMBER 1945.

54 OFFICERS RECEIVE AWARDS FOR WORK ON ATOMIC BOMB PROJECT

Fifty-four officers of the United States Army have thus far been awarded the Distinguished Service Medal, the Legion of Merit, or an Oak Leaf Cluster in lieu of a second medal, for their contributions to the success of the atomic bomb project, the War Department announced today.

Awards of the Distinguished Service Medal to Major General Leslie Richard Groves, who as commanding general of the Manhattan Engineer District was head of the entire project (date of release: September 12, 1945), and to Brigadier General Thomas F. Farrell, who was deputy to the commanding general (date of release: October 30, 1945), were announced previously. The following awards were announced today.

DISTINGUISHED SERVICE MEDAL

TO: FRANKLIN T. MATTHIAS, Colonel, U. S. Army, 214 Rennoc Rd., Fountain City, Tenn
FOR: As Area Engineer, Hanford Engineer Works, Manhattan Engineer District, from February, 1943, to August, 1945, he performed distinguished services in connection with the development of the Atomic Bomb. He bore the responsibility for the expeditious construction of plant areas and housing facilities necessary to this undertaking. His success in procuring the necessary manpower, his tact and diplomacy in establishing harmonious relationships between management and labor, his ability in formulating and administering sound security and secrecy restrictions, and his resourcefulness in surmounting unforeseen obstacles even beyond those inherent in construction projects were decisive factors in the production of the basic materials used in the Atomic Bomb.

TO: KENNETH D. NICHOLS, Colonel, U. S. Army, 4030 Rocky River Dr., Cleveland, Ohio.
FOR: As District Engineer, Manhattan Engineer District, from August, 1943, to August, 1945, he distinguished himself while performing duties in connection with the development of the Atomic Bomb. Overcoming many and varied difficulties, he perfected the organization of diverse elements and installations and by his outstanding knowledge determined procedures for the most effective utilization of all components, thus creating a secure and efficient team to carry out a work of unparalleled magnitude and complexity.

TO: STAFFORD L. WARREN, Colonel, U. S. Army, Box 287, Crittenden Sta., Rochester, N. Y.
FOR: As Chief of the Medical Section, Manhattan Engineer District, from November, 1943, to August, 1945, he performed exceptionally meritorious and distinguished service in connection with the development of the Atomic Bomb. He was charged with the grave responsibility of safeguarding and maintaining at a high level the health and welfare of all personnel engaged in a new field of endeavor. His inspiring leadership, initiative and resourcefulness, his farsighted vision and perseverance, his professional knowledge and skill, and his unswerving devotion to his task contributed significantly to the attainment of successful results.

OAK LEAF CLUSTER TO LEGION OF MERIT

TO: ELMER E. KIRKPATRICK, JR., Colonel, U. S. Army, 501 W. 13th St., Oklahoma City, Okla.
FOR: As Special Assistant to the Commanding General, and as Deputy District Engineer, Manhattan Engineer District, from September, 1944, to August, 1945, he was responsible for the expeditious accomplishment of special assignments which contributed materially to the success of the Atomic Bomb program. As Deputy

MORE

1-B

District Engineer he effected a reorganization of a portion of the district office imperatively needed to properly reflect and control the accelerated program under development. As liaison officer overseas with the Army Air Forces, he coordinated successfully the many and varied details coincident to dropping the first Atomic Bomb upon the enemy. His insight into every problem, and his decisive immediate action, were qualities which greatly hastened the success of the Manhattan Engineer District.

LEGION OF MERIT

TO: JAMES C. MARSHALL, Brigadier General, U. S. Army, Thornbrook Manor, Bryn Mawr, Pa.
FOR: As District Engineer, Manhattan Engineer District from August, 1942, to August, 1943, he displayed high professional skill, splendid judgment, superior organizational and administrative abilities, and devotion to duty in establishing and providing the initial momentum to the Manhattan Engineer District organization. Through his energy and skill, a huge construction program of the highest priority was initiated at the earliest possible moment and provided with unexcelled esprit de corps. His outstanding service was a substantial contribution to the success of the Atomic Bomb project, and reflects great credit upon himself and the military service.

TO: DONALD E. ANTES, Colonel, U. S. Army, 413 E. Prospect Ave., State College, Pa.
FOR: As Special Assistant to the Commanding General, Manhattan Engineer District, from August, 1944, to August, 1945, he performed outstanding services in connection with the development of the atomic bomb. He supervised the budgetary estimates for funds for the Manhattan Engineer District; he served as special inspector for the project, to help insure proper expenditure and proper records of the funds which the security of the project required to be kept secret; and he directed the establishment and organization of the staff of the district which handled property auditing. By his sound judgment, knowledge of and experience in the construction industry, clear understanding of Army procedures, unswerving loyalty and untiring devotion to duty, he contributed materially to the attainment of successful results.

TO: CLARENCE D. BARKER, Colonel, U. S. Army, Warwick Neck, R. I.
FOR: Outstanding services in connection with the development of the Atomic Bomb. As Chief Labor Advisor for the Manhattan Engineer District from September, 1942, to August, 1945, he displayed rare tact and diplomacy, splendid judgment and devotion to duty in supervising the manning of the Atomic Bomb project construction and operating forces. Through his abilities as a negotiator, excellent relations were established and maintained with labor union officials, as well as various Government agencies involved, with results which were vitally important to the success of the Manhattan Engineer District program. He rendered service of great value to the Government and assisted materially in the furtherance of the war effort.

TO: MARK C. FOX, Colonel, U. S. Army, 23 S. Earl St., Shippensburg, Pa.
FOR: Outstanding services from November, 1943, to August, 1945, as Construction Officer, Manhattan Engineer District. Due to his outstanding ability to drive construction through to completion regardless of how stringent the schedule, he was charged with successive responsibilities of completing and getting into production various critical components of the Atomic Bomb plants. His skill in securing the maximum output from labor and management, and his uncanny ability to locate necessary materials and to devise novel construction methods were of great assistance to the war effort.

TO: HYMER L. FRIEDELL, Colonel, U. S. Army, 1620 W. Como Ave., St. Paul, Minn.
FOR: As Executive Officer of the Medical Section, Manhattan Engineer District from September, 1942, to August, 1945, he was charged with the responsibility of coordinating the activities of all medical phases of the Atomic Bomb program. His superior professional skill, unflagging zeal and devotion to duty inspired his associates and were vital factors in the successful attack upon the numerous and complex medical problems arising during the development and production of the Atomic Bomb.

2-A

TO: JAMES C. MARSHALL, Brigadier General, U. S. Army, Thornbrook Manor, Bryn Mawr, Pa.
FOR: As District Engineer, Manhattan Engineer District from August, 1942, to August, 1943, he displayed high professional skill, splendid judgment, superior organizational and administrative abilities, and devotion to duty in establishing and providing the initial momentum to the Manhattan Engineer District organization. Through his energy and skill, a huge construction program of the highest priority was initiated at the earliest possible moment and provided with unexcelled esprit de corps. His outstanding service was a substantial contribution to the success of the Atomic Bomb project, and reflects great credit upon himself and the military service.

TO: DONALD E. ANTES, Colonel, U. S. Army, 413 E. Prospect Ave., State College, Pa.
FOR: As Special Assistant to the Commanding General, Manhattan Engineer District, from August, 1944, to August, 1945, he performed outstanding services in connection with the development of the atomic bomb. He supervised the budgetary estimates for funds for the Manhattan Engineer District; he served as special inspector for the project, to help insure proper expenditure and proper records of the funds which the security of the project required to be kept secret; and he directed the establishment and organization of the staff of the district which handled property auditing. By his sound judgment, knowledge of and experience in the construction industry, clear understanding of Army procedures, unswerving loyalty and untiring devotion to duty, he contributed materially to the attainment of successful results.

TO: CLARENCE D. BARKER, Colonel, U. S. Army, Warwick Neck, R. I.
FOR: Outstanding services in connection with the development of the Atomic Bomb. As Chief Labor Advisor for the Manhattan Engineer District from September, 1942, to August, 1945, he displayed rare tact and diplomacy, splendid judgment and devotion to duty in supervising the manning of the Atomic Bomb project construction and operating forces. Through his abilities as a negotiator, excellent relations were established and maintained with labor union officials, as well as various Government agencies involved, with results which were vitally important to the success of the Manhattan Engineer District program. He rendered service of great value to the Government and assisted materially in the furtherance of the war effort.

TO: MARK C. FOX, Colonel, U. S. Army, 23 S. Earl St., Shippensburg, Pa.
FOR: Outstanding services from November, 1943, to August, 1945, as Construction Officer, Manhattan Engineer District. Due to his outstanding ability to drive construction through to completion regardless of how stringent the schedule, he was charged with successive responsibilities of completing and getting into production various critical components of the Atomic Bomb plants. His skill in securing the maximum output from labor and management, and his uncanny ability to locate necessary materials and to devise novel construction methods were of great assistance to the war effort.

TO: HYMER L. FRIEDELL, Colonel, U. S. Army, 1620 W. Como Ave., St. Paul, Minn.
FOR: As Executive Officer of the Medical Section, Manhattan Engineer District from September, 1942, to August, 1945, he was charged with the responsibility of coordinating the activities of all medical phases of the Atomic Bomb program. His superior professional skill, unflagging zeal and devotion to duty inspired his associates and were vital factors in the successful attack upon the numerous and complex medical problems arising during the development and production of the Atomic Bomb.

TO: JOHN S. HODGSON, Colonel, U. S. Army, 205 S. View Ave., Montgomery, Ala.
FOR: As Chief of the Clinton Engineer Work Facilities and Service Division, Manhattan Engineer Works, at Oak Ridge, Tennessee, from December, 1944, to August, 1945, he was charged with the responsibility of supervising all non-industrial

MORE

facilities of military area of 59,000 acres including a community of more than 70,000 residents and widely separated employment areas. Continually handicapped by overtaxed facilities, rigid security, and unpredictable changes beyond his control, he applied outstanding skill as a coordinator and administrator to successfully integrate all essential facilities, municipal functions, and services into a unit which functioned at optimum effectiveness.

TO: JOHN LANSDALE, JR., Colonel, U. S. Army, 1857 Union Commerce Bldg., Cleveland, Ohio.
FOR: As Chief of the Special Intelligence Division in the Office of the Commanding General of the Manhattan Engineer District, and as legal adviser, from August, 1942, to August, 1945, he operated throughout the United States and in foreign countries, handling with exceptional skill and efficiency many important matters of the highest classification of the War Department, both in this country and abroad. A large share of the credit for the success of the Atomic Bomb project justly belongs to him.

TO: EARL H. MARSDEN, Colonel, U. S. Army, 374 Huntington St., New Haven, Conn.
FOR: He performed outstanding service as Executive Officer, Manhattan Engineer District, from July, 1943, to August, 1945. Always under great pressure, he quickly comprehended and rapidly solved the countless problems concerned in effectively coordinating the efforts of scores of great industrial firms, scientific institutions, and governmental agencies. His outstanding administrative and executive abilities were an inspiration to his associates and contributed materially to the success of the Atomic Bomb project.

TO: LYLE E. SEEMAN, Colonel, U. S. Army, 1611 Harbert Ave., Memphis, Tenn.
FOR: As Special Assistant to the Commanding General, Manhattan Engineer District, from May 3 to August 7, 1945, he was responsible for the expeditious accomplishment of special assignments which contributed materially to the successful results of the Atomic Bomb program. Through his technical knowledge, keen insight and sound judgment, he coordinated many details which expedited the dropping of the first Atomic Bomb on the enemy.

TO: GERALD R. TYLER, Colonel, U. S. Army, 5131 Cedar Ave., Philadelphia, Pa.
FOR: As Commanding Officer, Los Alamos Post, Manhattan Engineer District from October, 1944, to August, 1945, he displayed high professional skill, splendid judgment and high devotion to duty in supervising the supply, transportation, housing and other construction activities of the post. Through his skill and diplomacy, excellent relations were maintained between the military and scientific groups on the post, which were absolutely necessary for the successful attainment of the objective, the Atomic Bomb.

TO: WILLIAM A. CONSODINE, Lieutenant Colonel, U. S. Army, 22 Franklin Pl., Maplewood, N. J.
FOR: Outstanding services from December, 1943, to August, 1945, in connection with the development of the Atomic Bomb. As Deputy Chief of the Special Intelligence Division and as Officer in Charge of Public Relations and Publicity, Office of the Commanding General, Manhattan Engineer District, he demonstrated exceptional judgment, resourcefulness, initiative, foresight, diplomacy and devotion to duty, contributing materially to the successful results attained.

TO: RICHARD W. COOK, Lieutenant Colonel, U. S. Army, 920 $14\frac{1}{2}$ St., Rock Island, Ill.
FOR: Outstanding services from July, 1944, to August, 1945. As Officer in Charge of Operations, K-25 Plant, Clinton Engineer Works, Manhattan Engineer District, he was responsible for placing in operation one of the largest plants to be used in the production of the Atomic Bomb. His untiring efforts, his leadership and his composure during periods of stress were a source of inspiration to all personnel engaged in the operation of the plant and spurred them on to greater efforts.

TO: WILLIAM P. CORNELIUS, Lieutenant Colonel, U. S. Army, Box 77, Ennis, Tex.
FOR: Outstanding service from August, 1943, to August, 1945, as officer in charge of contructing one of the largest Atomic Bomb plants. His outstanding abilities as an engineer, organizer and leader were substantially responsible for meeting difficult construction schedules and in insuring that vital elements of the plant

FOR: As Chief of the Special Intelligence Division in the Office of the Commanding General of the Manhattan Engineer District, and as legal adviser, from August, 1942, to August, 1945, he operated throughout the United States and in foreign countries, handling with exceptional skill and efficiency many important matters of the highest classification of the War Department, both in this country and abroad. A large share of the credit for the success of the Atomic Bomb project justly belongs to him.

TO: EARL H. MARSDEN, Colonel, U. S. Army, 374 Huntington St., New Haven, Conn.
FOR: He performed outstanding service as Executive Officer, Manhattan Engineer District, from July, 1943, to August, 1945, Always under great pressure, he quickly comprehended and rapidly solved the countless problems concerned in effectively coordinating the efforts of scores of great industrial firms, scientific institutions, and governmental agencies. His outstanding administrative and executive abilities were an inspiration to his associates and contributed materially to the success of the Atomic Bomb project.

TO: LYLE E. SEEMAN, Colonel, U. S. Army, 1611 Harbert Ave., Memphis, Tenn.
FOR: As Special Assistant to the Commanding General, Manhattan Engineer District, from May 3 to August 7, 1945, he was responsible for the expeditious accomplishment of special assignments which contributed materially to the successful results of the Atomic Bomb program. Through his technical knowledge, keen insight and sound judgment, he coordinated many details which expedited the dropping of the first Atomic Bomb on the enemy.

TO: GERALD R. TYLER, Colonel, U. S. Army, 5131 Cedar Ave., Philadelphia, Pa.
FOR: As Commanding Officer, Los Alamos Post, Manhattan Engineer District from October, 1944, to August, 1945, he displayed high professional skill, splendid judgment and high devotion to duty in supervising the supply, transportation, housing and other construction activities of the post. Through his skill and diplomacy, excellent relations were maintained between the military and scientific groups on the post, which were absolutely necessary for the successful attainment of the objective, the Atomic Bomb.

TO: WILLIAM A. CONSODINE, Lieutenant Colonel, U. S. Army, 22 Franklin Pl., Maplewood, N. J.
FOR: Outstanding services from December, 1943, to August, 1945, in connection with the development of the Atomic Bomb. As Deputy Chief of the Special Intelligence Division and as Officer in Charge of Public Relations and Publicity, Office of the Commanding General, Manhattan Engineer District, he demonstrated exceptional judgment, resourcefulness, initiative, foresight, diplomacy and devotion to duty, contributing materially to the successful results attained.

TO: RICHARD W. COOK, Lieutenant Colonel, U. S. Army, 920 14½ St., Rock Island, Ill.
FOR: Outstanding services from July, 1944, to August, 1945. As Officer in Charge of Operations, K-25 Plant, Clinton Engineer Works, Manhattan Engineer District, he was responsible for placing in operation one of the largest plants to be used in the production of the Atomic Bomb. His untiring efforts, his leadership and his composure during periods of stress were a source of inspiration to all personnel engaged in the operation of the plant and spurred them on to greater efforts.

TO: WILLIAM P. CORNELIUS, Lieutenant Colonel, U. S. Army, Box 77, Ennis, Tex.
FOR: Outstanding service from August, 1943, to August, 1945, as officer in charge of contructing one of the largest Atomic Bomb plants. His outstanding abilities as an engineer, organizer and leader were substantially responsible for meeting difficult construction schedules and in insuring that vital elements of the plant were ready for early use. Colonel Cornelius' exceptional performance in a most difficult construction program reflects great credit upon himself and the military service.

MORE

3-B

TO: PEER DE S...VA, Lieutenant Colonel, U. S. Army, 320 Taylor St., San Francisco, Calif.

FOR: As Security Officer, Los Alamos Post, Manhattan Engineer District, from November, 1943, to August, 1945, he was responsible for the security of the post and its activities pertaining to the development of the Atomic Bomb. His initiative, foresight and resourcefulness, his tact and diplomacy, and his untiring zeal and devotion to duty contributed materially to the security of the project and the attainment of the successful results.

TO: ALLAN C. JOHNSON, Lieutenant Colonel, U. S. Army, 642 Ovington Ave., Brooklyn, N. Y.

FOR: As Washington Liaison Officer of the Manhattan Engineer District from August, 1942, to August, 1945, he played a vital part in insuring the uninterrupted and rapid procurement of material, supplies, and equipment costing millions of dollars and necessary in the development and production of that greatest weapon. His sound judgment, initiative and resourcefulness, tact and diplomacy, and untiring devotion to duty overcame the handicaps necessarily imposed by rigid security and contributed significantly to the attainment of successful results.

TO: ROBERT W. LOCKRIDGE, Lieutenant Colonel, U. S. Army, 107 Washington Ave., Lewistown, Pa.

FOR: As Assistant to the Associate Director at the Atomic Bomb project, Los Alamos Post, Manhattan Engineer District. From July, 1944, to August, 1945, he was charged with the special procurement necessary to produce the Atomic Bomb. The necessity of secrecy was paramount, and multiplied the difficulties encountered in other phases of his vital assignment. Despite seemingly insurmountable handicaps, through his dominant driving power and will to succeed, he established a preeminent record in procuring and pre-assembling many of the major parts used in final assembly of the test bomb and for the final assembly and shipment of bombs destined for the Theater of Operations. These accomplishments involved liaison and coordination of the highest order with the Army Air Forces, Transportation Corps, Army Service Forces, and the Navy.

TO: CURTIS A. NELSON, Lieutenant Colonel, U. S. Army, 1001 S. Minnesota St., New Ulm, Minn.

FOR: As Chief of the Personnel Division, Manhattan Engineer District, from February, 1944, to August, 1945, was responsible for supplying and conserving manpower for the construction and operation of the Atomic Bomb project. Under his inspiring leadership, one of the largest and most complex manpower procurement programs of the war was successfully accomplished. He demonstrated marked aggressiveness and exceptional organizing ability in directing the recruitment of over a quarter-million workers, and in establishing and administering an unique military organization composed of Army officers, Navy officers, and Army enlisted personnel, nearly all of whom were scientists or skilled technicians.

TO: WILLIAM B. PARSONS, Lieutenant Colonel, U. S. Army, 605 Third St., San Francisco, Calif.

FOR: As Chief of the Intelligence and Security Division, Manhattan Engineer District, from February, 1944, to August, 1945. Due to the need for extraordinary security measures to maintain Atomic Bomb secrets, he was given the responsibility of developing and directing the entire organization for safeguarding them. In spite of the tremendous handicaps imposed by the necessity of forming a completely new and independent intelligence and security network, and in spite of the unprecedented size and scope of the program to be protected, he successfully fulfilled his mission in safeguarding the greatest secret of the war.

TO: ARTHUR V. PETERSON, Lieutenant Colonel, U. S. Army, 1880 Haring St., Brooklyn, New York.

FOR: From November, 1942, to August, 1945, he served as Area Engineer, Chicago Area of the Manhattan Engineer District, and as coordinator of production for the primary material used in atomic bombs. In his brilliant performance of these duties, he displayed administrative and technical abilities of a high order and contributed significantly to the success of the program.

TO: CHARLES E. REA, Lieutenant Colonel, U. S. Army, 1932 Bayard Ave., St. Paul, Minn.

TO: ALLAN C. JOHNSON, Lieutenant Colonel, U. S. Army, 642 Ovington Ave., Brooklyn, N. Y.
FOR: As Washington Liaison Officer of the Manhattan Engineer District from August, 1942, to August, 1945, he played a vital part in insuring the uninterrupted and rapid procurement of material, supplies, and equipment costing millions of dollars and necessary in the development and production of that greatest weapon. His sound judgment, initiative and resourcefulness, tact and diplomacy, and untiring devotion to duty overcame the handicaps necessarily imposed by rigid security and contributed significantly to the attainment of successful results.

TO: ROBERT W. LOCKRIDGE, Lieutenant Colonel, U. S. Army, 107 Washington Ave., Lewistown, Pa.
FOR: As Assistant to the Associate Director at the Atomic Bomb project, Los Alamos Post, Manhattan Engineer District. From July, 1944, to August, 1945, he was charged with the special procurement necessary to produce the Atomic Bomb. The necessity of secrecy was paramount, and multiplied the difficulties encountered in other phases of his vital assignment. Despite seemingly insurmountable handicaps, through his dominant driving power and will to succeed, he established a preeminent record in procuring and pre-assembling many of the major parts used in final assembly of the test bomb and for the final assembly and shipment of bombs destined for the Theater of Operations. These accomplishments involved liaison and coordination of the highest order with the Army Air Forces, Transportation Corps, Army Service Forces, and the Navy.

TO: CURTIS A. NELSON, Lieutenant Colonel, U. S. Army, 1001 S. Minnesota St., New Ulm, Minn.
FOR: As Chief of the Personnel Division, Manhattan Engineer District, from February, 1944, to August, 1945, was responsible for supplying and conserving manpower for the construction and operation of the Atomic Bomb project. Under his inspiring leadership, one of the largest and most complex manpower procurement programs of the war was successfully accomplished. He demonstrated marked aggressiveness and exceptional organizing ability in directing the recruitment of over a quarter-million workers, and in establishing and administering an unique military organization composed of Army officers, Navy officers, and Army enlisted personnel, nearly all of whom were scientists or skilled technicians.

TO: WILLIAM B. PARSONS, Lieutenant Colonel, U. S. Army, 605 Third St., San Francisco, Calif.
FOR: As Chief of the Intelligence and Security Division, Manhattan Engineer District, from February, 1944, to August, 1945. Due to the need for extraordinary security measures to maintain Atomic Bomb secrets, he was given the responsibility of developing and directing the entire organization for safeguarding them. In spite of the tremendous handicaps imposed by the necessity of forming a completely new and independent intelligence and security network, and in spite of the unprecedented size and scope of the program to be protected, he successfully fulfilled his mission in safeguarding the greatest secret of the war.

TO: ARTHUR V. PETERSON, Lieutenant Colonel, U. S. Army, 1880 Haring St., Brooklyn, New York.
FOR: From November, 1942, to August, 1945, he served as Area Engineer, Chicago Area of the Manhattan Engineer District, and as coordinator of production for the primary material used in atomic bombs. In his brilliant performance of these duties, he displayed administrative and technical abilities of a high order and contributed significantly to the success of the program.

TO: CHARLES E. REA, Lieutenant Colonel, U. S. Army, 1932 Bayard Ave., St. Paul, Minn.
FOR: As Chief of Clinical Services, Manhattan Engineer District, from December, 1943, to August, 1945. Faced with the responsibility of organizing, administering, and supervising complete hospital and clinical facilities for a new-born and

MORE

rapidly growing industry in wartime community, which ultimately included more than 70,000 residents, he demonstrated exceptional administrative abilities and professional skill as a surgeon.

TO: JOHN R. RUHOFF, Lieutenant Colonel, U. S. Army, 335 Wesley Ave., Ferguson, Mo.
FOR: As Area Engineer, Madison Square Area, Manhattan Engineer District, he was responsible for the supply of all facilities to the Manhattan District, all plant feed materials, all special materials and supplies not available commercially, a task that required him to direct research, develop new processes, construct plants, and contract with foreign agencies for raw materials. He secured the cooperation of leading chemical firms despite stringent security restrictions which made it difficult to convince them of the vital importance of the work. Later, as officer in charge of a project, Clinton Engineer Works, Oak Ridge, Tennessee, he was responsible for operating and steadily increasing the production of a major plant engaged in turning out a vital component of atomic bombs.

TO: STANLEY L. STEWART, Lieutenant Colonel, U. S. Army, Box 1561, Bisbee, Ariz.
FOR: As Area Engineer, Calexico Area, Manhattan Engineer District, from March, 1943, to August, 1945, he displayed great force, judgment, and comprehension of details in the accomplishment of an assignment vital to the success of the atomic bomb project. Despite problems which would have doomed to failure the efforts of a less stouthearted individual, Colonel Stewart contributed materially to the successful accomplishment of the Atomic Bomb project.

TO: JAMES C. STOWERS, Lieutenant Colonel, U. S. Army, 811 State St., Natches, Miss
FOR: From January, 1943, to August, 1945, he served as the officer responsible for coordinating the research, development, design and procurement for one of the largest plants to be used in the production of the Atomic Bomb for the Manhattan Engineer District. Despite the innumerable obstacles inherent in the nature of such an unprecedented undertaking, his outstanding knowledge of engineering and material and equipment procurement, together with his aggressive attacks upon each of a multitude of complex details, effected a preeminently successful culmination of his assignment. He aided in the selection of the plant site, acted as liaison officer with foreign scientists, organized the initial operations office, established off-site area offices, directed the administrative activities of over 100 prime contractors and over 200 subcontractors and supervised negotiation of contracts totaling over $200,000,000.

TO: ALFONSO TAMMARO, Lieutenant Colonel, U. S. Army, 24 Edgehill Rd., Providence, R. I.
FOR: From July, 1943, to August, 1945, first as Area Engineer, he was responsible for the expeditious construction and successful operation of one of the plants manufacturing Atomic Bomb process equipment, and in this position his vitality and drive overcame numerous obstacles. Later as Chief of the Contracts and Claims Branch of the Manhattan Engineer District, he was charged with the reorganization of the District Legal, Contract, Procurement, Claims and Legal Assistance Sections within the Contracts and Claims Branch, an assignment in which he devised procedures to meet the unique requirements of the Atomic Bomb program. He prepared and negotiated unusual contracts, reviewed and approved estimates and fees negotiated by others, and safeguarded the Government's interests in contracts for unusually large expenditures of public funds.

TO: CHARLES VANDEN-BULCK, Lieutenant Colonel, U. S. Army, Box 231, Mountain View, N. J.
FOR: As Chief Administrative Officer of the Manhattan Engineer District from October, 1942, to August, 1945. Although handicapped by rigid security control which at times required wide variation from normal War Department administrative procedures, he ingeniously devised many new means for effecting special administrative requirements. By his initiative, great force and unusual comprehension of details, he rendered service of outstanding value to the Government and assisted materially in the furtherance of the war effort.

TO: WALTER J. WILLIAMS, Lieutenant Colonel, U. S. Army, Route 2, Elkhart, Ind.
FOR: As Officer in Charge of one of the major divisions of the Manhattan Engineer District from January to August, 1945, he displayed exceptional ability as an organizer and director. Through his accuracy of decision and firmness in execution,

and contract with foreign agencies for raw materials. He secured the cooperation of leading chemical firms despite stringent security restrictions which made it difficult to convince them of the vital importance of the work. Later, as officer in charge of a project, Clinton Engineer Works, Oak Ridge, Tennessee, he was responsible for operating and steadily increasing the production of a major plant engaged in turning out a vital component of atomic bombs.

TO: STANLEY L. STEWART, Lieutenant Colonel, U. S. Army, Box 1561, Bisbee, Ariz.
FOR: As Area Engineer, Calexico Area, Manhattan Engineer District, from March, 1943, to August, 1945, he displayed great force, judgment, and comprehension of details in the accomplishment of an assignment vital to the success of the atomic bomb project. Despite problems which would have doomed to failure the efforts of a less stouthearted individual, Colonel Stewart contributed materially to the successful accomplishment of the Atomic Bomb project.

TO: JAMES C. STOWERS, Lieutenant Colonel, U. S. Army, 811 State St., Natchez, Miss
FOR: From January, 1943, to August, 1945, he served as the officer responsible for coordinating the research, development, design and procurement for one of the largest plants to be used in the production of the Atomic Bomb for the Manhattan Engineer District. Despite the innumerable obstacles inherent in the nature of such an unprecedented undertaking, his outstanding knowledge of engineering and material and equipment procurement, together with his aggressive attacks upon each of a multitude of complex details, effected a preeminently successful culmination of his assignment. He aided in the selection of the plant site, acted as liaison officer with foreign scientists, organized the initial operations office, established off-site area offices, directed the administrative activities of over 100 prime contractors and over 200 subcontractors and supervised negotiation of contracts totaling over $200,000,000.

TO: ALFONSO TAMMARO, Lieutenant Colonel, U. S. Army, 24 Edgehill Rd., Providence, R. I.
FOR: From July, 1943, to August, 1945, first as Area Engineer, he was responsible for the expeditious construction and successful operation of one of the plants manufacturing Atomic Bomb process equipment, and in this position his vitality and drive overcame numerous obstacles. Later as Chief of the Contracts and Claims Branch of the Manhattan Engineer District, he was charged with the reorganization of the District Legal, Contract, Procurement, Claims and Legal Assistance Sections within the Contracts and Claims Branch, an assignment in which he devised procedures to meet the unique requirements of the Atomic Bomb program. He prepared and negotiated unusual contracts, reviewed and approved estimates and fees negotiated by others, and safeguarded the Government's interests in contracts for unusually large expenditures of public funds.

TO: CHARLES VANDEN-BULCK, Lieutenant Colonel, U. S. Army, Box 231, Mountain View, N. J.
FOR: As Chief Administrative Officer of the Manhattan Engineer District from October, 1942, to August, 1945. Although handicapped by rigid security control which at times required wide variation from normal War Department administrative procedures, he ingeniously devised many new means for effecting special administrative requirements. By his initiative, great force and unusual comprehension of details, he rendered service of outstanding value to the Government and assisted materially in the furtherance of the war effort.

TO: WALTER J. WILLIAMS, Lieutenant Colonel, U. S. Army, Route 2, Elkhart, Ind.
FOR: As Officer in Charge of one of the major divisions of the Manhattan Engineer District from January to August, 1945, he displayed exceptional ability as an organizer and director. Through his accuracy of decision and firmness in execution, a construction project of unprecedented magnitude, and complexity, absolutely necessary for the creation of the Atomic Bomb, was brought into production in the shortest possible time.

MORE

5-B

TO: JEROME O. [illegible]ERMAN, Major, U. S. Army, 1 Marble Hill Ave., New York, N. Y.
FOR: As Technical Assistant at Los Alamos Post, Manhattan Engineer District, from November, 1943, to August, 1945, he was responsible for the research and development of methods used in casting the necessary high explosives for the Atomic Bomb program. In fulfilling this assignment, vital to the success of the program, his initiative, perseverance, patience and indomitable will to succeed conquered all difficulties encountered in a complex process which was extremely hazardous at every stage. Due to the strict requirements and specifications involved, he found it necessary to devise entirely new and unique methods of processing high explosives in order that the results desired by the scientific staff could be achieved.

TO: HORACE S. BENBOW, Major, U. S. Army, 116 N. Weber St., Colorado Springs, Colo.
FOR: Services from June, 1944, to August, 1945, as liaison officer between the Manhattan Engineer District and the British and Canadian Scientific Group at Montreal, Canada. He displayed great administrative ability, extraordinary foresight, and diligence in carrying out his trying assignment. Despite the handicaps imposed by rigid security requirements and the complex nature of scientific work collaborated upon, he established close relations among the three nations and facilitated the procurement of certain critical feed materials for the Atomic Bomb project.

TO: HORACE K. CALVERT, Major, U. S. Army, Box 192, Madill, Okla.
FOR: As Officer in charge of the London, England, Branch, Intelligence Section, Manhattan Engineer District, from February, 1944, to August, 1945, he brought to bear on his difficult assignment the full benefit of his rare abilities. Through his initiative and resourcefulness, diplomacy and tact, untiring energy and devotion to duty, vital data was secured, evaluated expeditiously and made available to further the District program.

TO: JOHN A. DERRY, Major, U. S. Army, 467 E. High Ave., New Philadelphia, Ohio.
FOR: Services in connection with the Atomic Bomb program from December, 1942, to August, 1945. Charged with the duty of coordinating construction and expediting critical materials and equipment for a major component of the Manhattan Engineer District Project, he carried out his vital mission in an exemplary manner despite innumerable handicaps and the pressure of most urgent schedules. Later he was responsible for Washington liaison matters involving the ordnance and design phases of the Atomic Bomb, a duty in which he displayed sound judgment, immense capacity for work, and outstanding devotion to duty.

TO: HAROLD A. FIDLER, Major, U. S. Army, 2247 Stuart St., Berkeley, Calif.
FOR: Services in connection with the Atomic Bomb program from October, 1942, to August, 1945, as Engineer of the California Area, Manhattan Engineer District. At the University of California and associated laboratories, he expedited and administered research and development work for the Atomic Bomb major production process. Although handicapped by rigid security restrictions, he acquired and maintained the whole-hearted cooperation of private organizations and governmental agencies, and through vigorous initiative and willing assumption of responsibilities played a vital part in the early production of atomic bombs, demonstrating a high order of technical ability and exceptional qualities as an administrator in the discharge of his assignment.

TO: CHAPLAIN MATTHEW H. IMRIE, Major, U. S. Army, 20 Post Ave., New York, N. Y.
FOR: Serving from August, 1944, to August, 1945, at the isolated Los Alamos post of the Manhattan Engineer District. He was responsible for the spiritual welfare and morale of the numerous men and women, both civilian and military, resident and working at that post. Despite the many difficulties and discouragements inherent in the situation, he surmounted all obstacles to contribute significantly to this important part of the over-all project. He exhibited in his work indefatigable energy, comprehensive human understanding, and dauntless cheerfulness combined with sound common sense and ecclesiastical vision.

TO: WILBUR E. KELLEY, Major, U. S. Army, 831 Cedar Bough, New Albany, Ind.
FOR: Services from April, 1943, to August, 1945. First as Chief of Operations for one of the major plants of the Manhattan Engineer District, he was responsible for supervising and administering the initial operation of an extremely complex production plant costing approximately $300,000,000, with a peak operating staff of about 24,000 persons. Later he served as area engineer of a unit responsible [illegible]

in order that the results desired by the scientific staff could be achieved.

TO: HORACE S. BENBOW, Major, U. S. Army, 116 N. Weber St., Colorado Springs, Colo.
FOR: Services from June, 1944, to August, 1945, as liaison officer between the Manhattan Engineer District and the British and Canadian Scientific Group at Montreal, Canada. He displayed great administrative ability, extraordinary foresight, and diligence in carrying out his trying assignment. Despite the handicaps imposed by rigid security requirements and the complex nature of scientific work collaborated upon, he established close relations among the three nations and facilitated the procurement of certain critical feed materials for the Atomic Bomb project.

TO: HORACE K. CALVERT, Major, U. S. Army, Box 192, Madill, Okla.
FOR: As Officer in charge of the London, England, Branch, Intelligence Section, Manhattan Engineer District, from February, 1944, to August, 1945, he brought to bear on his difficult assignment the full benefit of his rare abilities. Through his initiative and resourcefulness, diplomacy and tact, untiring energy and devotion to duty, vital data was secured, evaluated expeditiously and made available to further the District program.

TO: JOHN A. DERRY, Major, U. S. Army, 467 E. High Ave., New Philadelphia, Ohio.
FOR: Services in connection with the Atomic Bomb program from December, 1942, to August, 1945. Charged with the duty of coordinating construction and expediting critical materials and equipment for a major component of the Manhattan Engineer District Project, he carried out his vital mission in an exemplary manner despite innumerable handicaps and the pressure of most urgent schedules. Later he was responsible for Washington liaison matters involving the ordnance and design phases of the Atomic Bomb, a duty in which he displayed sound judgment, immense capacity for work, and outstanding devotion to duty.

TO: HAROLD A. FIDLER, Major, U. S. Army, 2247 Stuart St., Berkeley, Calif.
FOR: Services in connection with the Atomic Bomb program from October, 1942, to August, 1945, as Engineer of the California Area, Manhattan Engineer District. At the University of California and associated laboratories, he expedited and administered research and development work for the Atomic Bomb major production process. Although handicapped by rigid security restrictions, he acquired and maintained the whole-hearted cooperation of private organizations and governmental agencies, and through vigorous initiative and willing assumption of responsibilities played a vital part in the early production of atomic bombs, demonstrating a high order of technical ability and exceptional qualities as an administrator in the discharge of his assignment.

TO: CHAPLAIN MATTHEW H. IMRIE, Major, U. S. Army, 20 Post Ave., New York, N. Y.
FOR: Serving from August, 1944, to August, 1945, at the isolated Los Alamos post of the Manhattan Engineer District. He was responsible for the spiritual welfare and morale of the numerous men and women, both civilian and military, resident and working at that post. Despite the many difficulties and discouragements inherent in the situation, he surmounted all obstacles to contribute significantly to this important part of the over-all project. He exhibited in his work indefatigable energy, comprehensive human understanding, and dauntless cheerfulness combined with sound common sense and ecclesiastical vision.

TO: WILBUR E. KELLEY, Major, U. S. Army, 831 Cedar Bough, New Albany, Ind.
FOR: Services from April, 1943, to August, 1945. First as Chief of Operations for one of the major plants of the Manhattan Engineer District, he was responsible for supervising and administering the initial operation of an extremely complex production plant costing approximately $300,000,000, with a peak operating staff of about 24,000 persons. Later he served as area engineer of a unit responsible for procurement, manufacture, and processing of the many rare and unusual feed materials required for the successful operation of the production plants involved in the Atomic Bomb program. Though handicapped by rigid security control, an

MORE

6-B

increasingly stringent time element, and unpredictable and sudden changes in requirements, Major Kelley succeeded in his mission.

TO: CLAUDE C. PIERCE, JR., Major, U. S. Army, 4112 Fourth St., North, Arlington, Va.
FOR: He served as Executive Officer to the Chief of Intelligence and Security Branch, Washington Liaison Office, Manhattan Engineer District, Army Service Forces, from January, 1944, to August, 1945. He displayed high professional skill, splendid judgment, exceptional organizational and administrative abilities and devotion to duty in his assignment of setting up and providing the initial momentum to that unit charged with keeping the research and development of the atomic bomb a secret.

TO: JOSEPH F. SALLY, Major, U. S. Army, 2116 35th St., Astoria, L. I., N. Y.
FOR: As Chief of Production at the Hanford Engineer Works, a major installation of the Manhattan Engineer District, from July, 1943, to August, 1945, he contributed in a high degree to the success of the atomic bomb program. His intense effort, grasp of intricate technical problems, organizational and leadership qualities, and devotion to duty were material factors in the early and successful production of atomic bombs.

TO: FRANCIS J. SMITH, Major, U. S. Army, 244 W. 74th St., New York, N. Y.
FOR: Services from February, 1944, to August, 1945. As Executive Assistant, Intelligence and Security Division, Manhattan Engineer District, at Oak Ridge, Tennessee, and Washington, D. C., he was charged with an assignment involving the acquisition and processing of vital information originating from foreign sources. The acumen, tenacity, proficiency and devotion to duty displayed by him throughout his successful prosecution of a most exacting task were outstanding and constituted a valuable contribution to the war effort.

TO: WILBER A. STEVENS, Major, U. S. Army, 2712 S. Arlington Ridge Rd., Arlington, Va.
FOR: He performed outstanding service as Chief, Operations Division, Los Alamos Post, Manhattan Engineer District, from May, 1943, to August, 1945, bearing the responsibility for all construction in the technical area and for both construction and maintenance of the post area. He overcame the major obstacles of stringent security, almost impossible completion dates and the difficulties of transporting materials over vast distances. By his tremendous efforts, great drive and superb skill as an engineer, he contributed most substantially to the successful completion of the Atomic Bomb project.

TO: HARRY S. TRAYNOR, Major, U. S. Army, 621 Walnut Ave., Syracuse, N. Y.
FOR: From January, 1943, to August, 1945, he served as construction and production chief of a major division of the program of the Manhattan Engineer District, and as special representative of the War Department on a mission of the highest importance abroad. In his brilliant performance of these duties, he displayed administrative and technical abilities of a high order and contributed significantly to the success of the program.

TO: JOHN E. VANCE, Major, U. S. Army, Perkins Rd., Woodbridge, New Haven, Conn.
FOR: As Research Officer in the Manhattan Engineer District, from January, 1944, to August, 1945, he was charged with the procurement, manufacture, and processing of the many rare and special raw materials required for the Atomic Bomb program. Though confronted daily with scientific problems in fields heretofore practically unexplored involving materials and procedures which had never before been developed, he overcame all handicaps with outstanding scientific skill, executive ability and devotion to duty.

TO: ROBERT J. WIER, Major, U. S. Army, 2301 Locust St., St. Louis, Mo.
FOR: Services as Deputy to the Washington Liaison Officer, Manhattan Engineer District, from April, 1943, to August, 1945. He was responsible for insuring that the high priorities required for the project would cause minimum interference with other important features of the war program, and was outstanding in his ability to understand, evaluate, and solve procurement and expediting problems. His unfailing loyalty and devotion to duty were an inspiration to his associates and contributed in high degree to the war effort.

TO: JAMES F. NOLAN, Captain, U. S. Army, 336 Orchard Ave., Webster Groves, Mo.

to duty in his assignment of setting up and providing the initial momentum to that unit charged with keeping the research and development of the atomic bomb a secret.

TO: JOSEPH F. SALLY, Major, U. S. Army, 2116 35th St., Astoria, L. I., N. Y.
FOR: As Chief of Production at the Hanford Engineer Works, a major installation of the Manhattan Engineer District, from July, 1943, to August, 1945, he contributed in a high degree to the success of the atomic bomb program. His intense effort, grasp of intricate technical problems, organizational and leadership qualities, and devotion to duty were material factors in the early and successful production of atomic bombs.

TO: FRANCIS J. SMITH, Major, U. S. Army, 244 W. 74th St., New York, N. Y.
FOR: Services from February, 1944, to August, 1945. As Executive Assistant, Intelligence and Security Division, Manhattan Engineer District, at Oak Ridge, Tennessee, and Washington, D. C., he was charged with an assignment involving the acquisition and processing of vital information originating from foreign sources. The acumen, tenacity, proficiency and devotion to duty displayed by him throughout his successful prosecution of a most exacting task were outstanding and constituted a valuable contribution to the war effort.

TO: WILBER A. STEVENS, Major, U. S. Army, 2712 S. Arlington Ridge Rd., Arlington, Va.
FOR: He performed outstanding service as Chief, Operations Division, Los Alamos Post, Manhattan Engineer District, from May, 1943, to August, 1945, bearing the responsibility for all construction in the technical area and for both construction and maintenance of the post area. He overcame the major obstacles of stringent security, almost impossible completion dates and the difficulties of transporting materials over vast distances. By his tremendous efforts, great drive and superb skill as an engineer, he contributed most substantially to the successful completion of the Atomic Bomb project.

TO: HARRY S. TRAYNOR, Major, U. S. Army, 621 Walnut Ave., Syracuse, N. Y.
FOR: From January, 1943, to August, 1945, he served as construction and production chief of a major division of the program of the Manhattan Engineer District, and as special representative of the War Department on a mission of the highest importance abroad. In his brilliant performance of these duties, he displayed administrative and technical abilities of a high order and contributed significantly to the success of the program.

TO: JOHN E. VANCE, Major, U. S. Army, Perkins Rd., Woodbridge, New Haven, Conn.
FOR: As Research Officer in the Manhattan Engineer District, from January, 1944, to August, 1945, he was charged with the procurement, manufacture, and processing of the many rare and special raw materials required for the Atomic Bomb program. Though confronted daily with scientific problems in fields heretofore practically unexplored involving materials and procedures which had never before been developed, he overcame all handicaps with outstanding scientific skill, executive ability and devotion to duty.

TO: ROBERT J. WIER, Major, U. S. Army, 2301 Locust St., St. Louis, Mo.
FOR: Services as Deputy to the Washington Liaison Officer, Manhattan Engineer District, from April, 1943, to August, 1945. He was responsible for insuring that the high priorities required for the project would cause minimum interference with other important features of the war program, and was outstanding in his ability to understand, evaluate, and solve procurement and expediting problems. His unfailing loyalty and devotion to duty were an inspiration to his associates and contributed in high degree to the war effort.

TO: JAMES F. NOLAN, Captain, U. S. Army, 336 Orchard Ave., Webster Groves, Mo.
FOR: As Medical Officer, Los Alamos Post, Manhattan Engineer District, from June, 1943, to July, 1945, he devised and instituted plans for safeguarding the post

MORE

17-B

against any possible disaster due to the handling of hazardous final products. He organized and staffed the post medical facilities consisting of a 75-bed hospital and a complete clinic serving 5,000 persons. Through his inspiring devotion to duty, superior professional skill and executive ability he contributed in great measure to the elimination of health hazards for the personnel engaged in the vast research and production program necessary to the development of the Atomic Bomb.

TO: FRANK P. ROSS, Captain, U. S. Army, Vian, Okla.
FOR: As Provost Marshal, Los Alamos Post, Manhattan Engineer District, and Commanding Officer, Military Police Detachment, 4817th Service Command Unit, from October, 1944, to August, 1945. Despite the great handicaps imposed by rigid security requirements and remote location he successfully reorganized his detachment upon assuming command, imbued his officers and men with the highest morale and esprit de corps, and contributed materially to the success of the Atomic Bomb project by guarding secret processes alertly and effectively, without friction and without imposing any additional burden on the large number of scientists engaged in technical work at his post.

TO: ARLENE G. SCHEIDENHELM, Captain, Route 2, Mendota, Ill.
FOR: As Commanding Officer of the Women's Army Corps Detachment, Manhattan Engineer District, from March, 1944, to August, 1945, she was responsible for the procurement, proper assignment and administration of approximately 250 women assigned to various sub-units throughout the United States and abroad. In performing her duties, she demonstrated rare and unusual judgment and the highest quality of leadership. Her organization achieved and maintained a high standard of discipline, efficiency and military bearing, and accomplished its primary mission of maintaining the security of the Atomic Bomb project by preparing, filing and handling all highly classified documents since inception of the program.

TO: HOWARD C. BUSH, First Lieutenant, U. S. Army, 725 Fourth Ave., Brooklyn, N. Y.
FOR: Service as a Special Unit Commander of the Military Police Detachment at the Los Alamos Post, Manhattan Engineer District, from December, 1944, to August, 1945. In order to safeguard materials and an area vital to the successful testing of the Atomic Bomb, his unit was required to remain on duty in an isolated location in the heart of the desert for a period of seven months. Living conditions were crude and monotonous, and recreational facilities practically non-existent. Despite the constant presence of these severe handicaps to morale, this officer, by his superb conduct, exceptional example and capable leadership, initiated and maintained throughout the tension and tedium of this trying period an outstanding morale and esprit de corps in his unit. By his expert command of his troops and careful guarding of a vital area, he prevented any occurrences which might have impeded the successful testing of the Atomic Bomb.

TO: WALTER A. PARISH, First Lieutenant, U. S. Army, 3918 Mt. Vernon Ave., Houston, Tex.
FOR: Services as Executive Officer, Intelligence and Security Division, Washington Liaison Office, Manhattan Engineer District, from September, 1944, to August, 1945. Despite the extreme strain of his assignment, brought to an even greater intensity during the crucial period immediately preceding the successful detonation of the Atomic Bomb upon Japan, he displayed outstanding qualities of industry, perseverance, and devotion to duty, and in so doing contributed materially to the furtherance of the war effort.

TO: GEORGE O. ROBINSON, JR., First Lieutenant, U. S. Army, Tunica, Miss.
FOR: Services as Public Relations Officer, Manhattan Engineer District, Oak Ridge, Tennessee, from June, 1944, to August, 1945. Through extraordinary diligence, diplomacy, and tact in dealing with the press and radio of the Nation, he was substantially instrumental in preventing compromise of security concerning the Atomic Bomb project. His ability to maintain the good will and friendship of reporters and news commentators redounded to the benefit of the military service at the time it became permissible to release information concerning the Manhattan Engineer District and its mission.

TO: JOSEPH VOLPE, JR., First Lieutenant, U. S. Army, 1618 Abingdon Dr., Alexandria, Va.
FOR: Services from March 24 to August 7, 1945, as Special Assistant, Intelligence and Security Division, Washington Liaison Office, Manhattan Engineer District

ing Officer, Military Police Detachment, 4817th Service Command Unit, from October, 1944, to August, 1945. Despite the great handicaps imposed by rigid security requirements and remote location he successfully reorganized his detachment upon assuming command, imbued his officers and men with the highest morale and esprit de corps, and contributed materially to the success of the Atomic Bomb project by guarding secret processes alertly and effectively, without friction and without imposing any additional burden on the large number of scientists engaged in technical work at his post.

TO: ARLENE G. SCHEIDENHELM, Captain, Route 2, Mendota, Ill.
FOR: As Commanding Officer of the Women's Army Corps Detachment, Manhattan Engineer District, from March, 1944, to August, 1945, she was responsible for the procurement, proper assignment and administration of approximately 250 women assigned to various sub-units throughout the United States and abroad. In performing her duties, she demonstrated rare and unusual judgment and the highest quality of leadership. Her organization achieved and maintained a high standard of discipline, efficiency and military bearing, and accomplished its primary mission of maintaining the security of the Atomic Bomb project by preparing, filing and handling all highly classified documents since inception of the program.

TO: HOWARD C. BUSH, First Lieutenant, U. S. Army, 725 Fourth Ave., Brooklyn, N. Y.
FOR: Service as a Special Unit Commander of the Military Police Detachment at the Los Alamos Post, Manhattan Engineer District, from December, 1944, to August, 1945. In order to safeguard materials and an area vital to the successful testing of the Atomic Bomb, his unit was required to remain on duty in an isolated location in the heart of the desert for a period of seven months. Living conditions were crude and monotonous, and recreational facilities practically non-existent. Despite the constant presence of these severe handicaps to morale, this officer, by his superb conduct, exceptional example and capable leadership, initiated and maintained throughout the tension and tedium of this trying period an outstanding morale and esprit de corps in his unit. By his expert command of his troops and careful guarding of a vital area, he prevented any occurrences which might have impeded the successful testing of the Atomic Bomb.

TO: WALTER A. PARISH, First Lieutenant, U. S. Army, 3918 Mt. Vernon Ave., Houston, Tex.
FOR: Services as Executive Officer, Intelligence and Security Division, Washington Liaison Office, Manhattan Engineer District, from September, 1944, to August, 1945. Despite the extreme strain of his assignment, brought to an even greater intensity during the crucial period immediately preceding the successful detonation of the Atomic Bomb upon Japan, he displayed outstanding qualities of industry, perseverance, and devotion to duty, and in so doing contributed materially to the furtherance of the war effort.

TO: GEORGE O. ROBINSON, JR., First Lieutenant, U. S. Army, Tunica, Miss.
FOR: Services as Public Relations Officer, Manhattan Engineer District, Oak Ridge, Tennessee, from June, 1944, to August, 1945. Through extraordinary diligence, diplomacy, and tact in dealing with the press and radio of the Nation, he was substantially instrumental in preventing compromise of security concerning the Atomic Bomb project. His ability to maintain the good will and friendship of reporters and news commentators redounded to the benefit of the military service at the time it became permissible to release information concerning the Manhattan Engineer District and its mission.

TO: JOSEPH VOLPE, JR., First Lieutenant, U. S. Army, 1618 Abingdon Dr., Alexandria, Va.
FOR: Services from March 24 to August 7, 1945, as Special Assistant, Intelligence and Security Division, Washington Liaison Office, Manhattan Engineer District,

MORE

Army Service Forces, he discharged duties involving complex legal proceedings surrounding the procurement of vital material. The intelligence, proficiency, perseverance and devotion to duty displayed by him were exceptional.

TO: MURRAY S. LEVINE, Chief Warrant Officer, U. S. Army, 782 E. 32nd St., Brooklyn, N. Y.
FOR: As Chief of the Selective Service Branch, Personnel Division, Manhattan Engineer District, from August, 1943, to August, 1945. Under severe restrictions of rigid security, he was primarily responsible for arranging with Selective Service for the occupational deferment of approximately 50,000 critically needed personnel for research development and production, a stupendous task which involved detailed dealings with hundreds of local boards. Mainly because of his conscientious devotion to duty the Manhattan Engineer District acquired the highest distinction of all the agencies possessing the privilege of certifying occupational deferments.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, N, Citations
11-16-45
3:00 P.M.

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

December 10, 1945

I M M E D I A T E   R E L E A S E

J O I N T   A R M Y - N A V Y   R E L E A S E

The Army and Navy contemplate a joint test of atomic bombs against naval vessels, Secretary of War Robert P. Patterson and Secretary of the Navy James Forrestal announced today. Planning is already underway for the operation which will involve large problems of logistics including the assembly of many naval vessels, extensive instrumentation for measuring results, and assembly of necessary personnel.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, N.
5:15 P.M.

N A V Y   D E P A R T M E N T

IMMEDIATE RELEASE
PRESS AND RADIO

FEBRUARY 4, 1946

JOINT ARMY-NAVY-STATE DEPARTMENT RELEASE

NEW COLLEGE ORGANIZED FOR HIGH-RANKING OFFICERS OF ARMED SERVICES AND STATE DEPARTMENT

High-ranking officers of the Army, Air Force and Navy, and of the Foreign Service and Department of State, will study joint problems of National Defense in a newly created college, which will be the highest level educational institution of the Armed Forces.

Organized under the authority of the Joint Chiefs of Staff, this college will be the first ever established to promote close integration between the highest levels of the armed services and the State Department.

The student body will be carefully selected from the key positions of each department. After completing the course, which lasts about 10 months, the students of each class will return to their individual duties.

The first class will start on September 3, 1946, and continue to June 21, 1947, with an enrollment of at least 100 students. The college will be situated at the site of the Army War College, Washington, D. C.

Among the subjects to be studied will be the atomic bomb and other new weapons, and their effect on the trend of warfare. Other developments in scientific research will be taught by military and civilian specialists.

The course will include a thorough study of the foreign policies of the United States and other major powers. Special attention will be given to the United Nations Organization and to other means of preventing war.

Major "home-front" problems, such as industrial production, communication, transportation and mobilization of manpower are to be given considerable research.

All the armed services in the highest echelons will study war preparedness from a "joint" point of view for the first time in history. This will include an analysis of the role of air and sea power and ground forces in future operations. Joint intelligence, communications, logistics, air operations and amphibious warfare will be studied under the general course, "Joint Operations."

N A V Y   D E P A R T M E N T

IMMEDIATE RELEASE
PRESS AND RADIO

FEBRUARY 4, 1946

JOINT ARMY-NAVY-STATE DEPARTMENT RELEASE

NEW COLLEGE ORGANIZED FOR HIGH-RANKING OFFICERS
OF ARMED SERVICES AND STATE DEPARTMENT

High-ranking officers of the Army, Air Force and Navy, and of the Foreign Service and Department of State, will study joint problems of National Defense in a newly created college, which will be the highest level educational institution of the Armed Forces.

Organized under the authority of the Joint Chiefs of Staff, this college will be the first ever established to promote close integration between the highest levels of the armed services and the State Department.

The student body will be carefully selected from the key positions of each department. After completing the course, which lasts about 10 months, the students of each class will return to their individual duties.

The first class will start on September 3, 1946, and continue to June 21, 1947, with an enrollment of at least 100 students. The college will be situated at the site of the Army War College, Washington, D. C.

Among the subjects to be studied will be the atomic bomb and other new weapons, and their effect on the trend of warfare. Other developments in scientific research will be taught by military and civilian specialists.

The course will include a thorough study of the foreign policies of the United States and other major powers. Special attention will be given to the United Nations Organization and to other means of preventing war.

Major "home-front" problems, such as industrial production, communication, transportation and mobilization of manpower are to be given considerable research.

All the armed services in the highest echelons will study war preparedness from a "joint" point of view for the first time in history. This will include an analysis of the role of air and sea power and ground forces in future operations. Joint intelligence, communications, logistics, air operations and amphibious warfare will be studied under the general course, "Joint Operations."

An analytical study will be made of operations in World War II. Particular emphasis will be placed on the problems and techniques of the several theaters--the mistakes and the lessons learned.

The Commandant of the new college is Vice Admiral Harry W. Hill, U.S.N., former Commander of the Fifth Amphibious Force and at present Commandant of the Army and Navy Staff College, Washington, D. C. Deputy Commandants of the new college are Major General Alfred M. Gruenther, U.S.A., at present Deputy Commandant of the Army and Navy Staff College, and Brigadier General T. H. Landon, Army Air Force, now Chief of the Air Section of the Army and Navy Staff College. State Department participation in the new college is under the direction of Assistant Secretary of State Donald Russell.

Members of the faculty will be drawn chiefly from all of the armed services and the State Department. Prominent scientists, professors and other civilian specialists will be invited to deliver lectures. Instruction will be principally by the lecture system, with committee studies, and reports and analyses by individual students. In the portion of the course known as "Conduct of War," extensive use will be made of problems in which realistic situations will be assumed, and solutions required by student groups.

Certain parts of the course will be held in conjunction with the Joint Army-Navy Industrial College, of which Brigadier General Donald A. Armstrong, U.S.A., is Commandant.

In the preparation of the detailed curriculum close liaison will be maintained with the Naval War College, Newport, Rhode Island, and the higher educational institutions of the Army Ground and Services Forces, Fort Leavenworth, Kansas, and the Army Air Force, Maxwell Field, Alabama.

***

FUTURE RELEASE
PLEASE NOTE DATE

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E   R E L E A S E

FOR RELEASE UPON DELIVERY

STATEMENT BY
THE HONORABLE ROBERT P. PATTERSON, SECRETARY OF WAR,
BEFORE THE SENATE SPECIAL COMMITTEE ON ATOMIC ENERGY,
AT 10:00 A. M., EST, FEBRUARY 14, 1946.

I am glad to express the views of the War Department regarding S. 1717 on which I have been asked to comment.

The Atomic Bomb

The possible military use of the energy released by atomic fission was brought to the attention of President Roosevelt in 1939. After preliminary development by the National Defense Research Committee and the Office of Scientific Research and Development, the project of producing atomic bombs was committed to the War Department in 1942. The project was pressed as a war measure with the greatest energy. The dropping of the two atomic bombs on Hiroshima and Nagasaki last August was followed within a week by the surrender of Japan. Meanwhile, the secrecy of the project had been preserved, a difficult matter in a program involving expenditure of two billion dollars and a scale of direct employment that reached 125,000 persons.

The enterprise was an unqualified success. Too much cannot be said in tribute to the scientists who developed the basic scientific facts and processes to the industrial groups who with infinite skill translated the work of the scientists into the final product, to General Groves and his assistants who directed the vast enterprise, and to the Congress for the trust reposed in the War Department in appropriating the vast sums that were necessary without insisting on disclosure of the details and thus risking premature revelation of what was being done.

Control of Atomic Energy

Long before the bombs were dropped it was realized that there were unmeasured possibilities in the development of atomic energy for industrial and other peacetime purposes as well as for use as a weapon of war. In May 1945 — Secretary Stimson, with the approval of the President, formed a committee to consider the subject and to recommend legislation for the control and development of atomic energy. The committee consisted of Secretary Stimson; James F. Byrnes (prior to his appointment as Secretary of State); Will Clayton, Assistant Secretary of State; Ralph Bard, Under Secretary of the Navy; George Harrison, President of the New York Life Insurance Company and Special Assistant to the Secretary of War; Dr. Vannevar Bush, Chairman of the Office of Scientific Research and Development; Dr. Karl Compton, President of Massachusetts Institute of Technology; and Dr. James Conant, President of Harvard University. The committee had the assistance of a Scientific Panel composed of four of the leading scientists in the project, -- Dr. J. R. Oppenheimer, Dr. E. O. Lawrence, Dr. A. H. Compton and Dr. Enrico Fermi. Legislation was drafted under direction of this committee and with the cooperation of the State Department, Interior Department and Department of Justice, the bill being later introduced as the May-Johnson bill.

I will not go into the details of the May-Johnson bill. The objectives, fully stated in the bill, are to promote the national welfare, to secure the

FUTURE RELEASE

FOR RELEASE UPON DELIVERY

STATEMENT BY
THE HONORABLE ROBERT P. PATTERSON, SECRETARY OF WAR,
BEFORE THE SENATE SPECIAL COMMITTEE ON ATOMIC ENERGY,
AT 10:00 A. M., EST, FEBRUARY 14, 1946.

I am glad to express the views of the War Department regarding S. 1717 on which I have been asked to comment.

The Atomic Bomb

The possible military use of the energy released by atomic fission was brought to the attention of President Roosevelt in 1939. After preliminary development by the National Defense Research Committee and the Office of Scientific Research and Development, the project of producing atomic bombs was committed to the War Department in 1942. The project was pressed as a war measure with the greatest energy. The dropping of the two atomic bombs on Hiroshima and Nagasaki last August was followed within a week by the surrender of Japan. Meanwhile, the secrecy of the project had been preserved, a difficult matter in a program involving expenditure of two billion dollars and a scale of direct employment that reached 125,000 persons.

The enterprise was an unqualified success. Too much cannot be said in tribute to the scientists who developed the basic scientific facts and processes to the industrial groups who with infinite skill translated the work of the scientists into the final product, to General Groves and his assistants who directed the vast enterprise, and to the Congress for the trust reposed in the War Department in appropriating the vast sums that were necessary without insisting on disclosure of the details and thus risking premature revelation of what was being done.

Control of Atomic Energy

Long before the bombs were dropped it was realized that there were unmeasured possibilities in the development of atomic energy for industrial and other peacetime purposes as well as for use as a weapon of war. In May 1945 Secretary Stimson, with the approval of the President, formed a committee to consider the subject and to recommend legislation for the control and development of atomic energy. The committee consisted of Secretary Stimson; James F. Byrnes (prior to his appointment as Secretary of State); Will Clayton, Assistant Secretary of State; Ralph Bard, Under Secretary of the Navy; George Harrison, President of the New York Life Insurance Company and Special Assistant to the Secretary of War; Dr. Vannevar Bush, Chairman of the Office of Scientific Research and Development; Dr. Karl Compton, President of Massachusetts Institute of Technology; and Dr. James Conant, President of Harvard University. The committee had the assistance of a Scientific Panel composed of four of the leading scientists in the project, -- Dr. J. R. Oppenheimer, Dr. E. O. Lawrence, Dr. A. H. Compton and Dr. Enrico Fermi. Legislation was drafted under direction of this committee and with the cooperation of the State Department, Interior Department and Department of Justice, the bill being later introduced as the May-Johnson bill.

I will not go into the details of the May-Johnson bill. The objectives, fully stated in the bill, are to promote the national welfare, to secure the national defense, to safeguard world peace, and to foster the acquisition of further knowledge concerning atomic energy. Responsibility is transferred

MORE

1-B

from the War Department to a new civilian agency, to be known as the Atomic Energy Commission, to take over and manage all source materials of atomic energy, all stock-piles of materials and all plants and property connected with development and use of atomic energy. Full ownership and control are vested in the United States. It is provided that the Commission interfere as little as possible with private research, and employ other governmental agencies educational and research institutions and private enterprise to the maximum extent. The Commission is given power to adopt the necessary security regulations to control the collection, publication and transmission of information on release of atomic energy, as required by considerations of national defense or military security.

The House Military Affairs Committee held hearings on the bill. It was freely criticized as a measure drafted by the military and intended to perpetuate military control of atomic energy, although the facts are that it was drafted by the committee of civilians named above and that it provides for transfer of responsibility from the War Department to a civilian agency. The House Committee, after adding several amendments including those further emphasizing freedom of research and investigation, reported the bill favorably.

I should add that the President, since introduction of the May-Johnson bill, has indicated that he is of the opinion that a number of changes should be made. The War Department will, of course, advocate such changes in discussion of any detailed legislation.

It was also realized by the War Department, prior to the time when the bombs were dropped, that the means of producing the atomic bomb would not forever remain the exclusive property of the United States, that in time other nations would be in a position to produce weapons utilizing atomic energy. Secretary Stimson was one of the first to recommend a policy of international supervision and control of the entire field of atomic energy, with a view to outlawing its utilization in war and to fostering world-wide exchange of information on atomic energy in connection with industrial and other peaceful purposes. I have been and still am of the same opinion as Secretary Stimson.

As the result of conferences on the international level, held last November and December and initiated by the President and the Secretary of State, the United States, Canada, United Kingdom and the Soviet Union joined in recommending to the United Nations that a commission be set up to study and make proposals on exchange of basic scientific information, on control of atomic energy to insure its use for only peaceful purposes, on elimination of atomic weapons from national armaments, and on effective safeguards by inspection and other means to protect complying states against violations and evasions, -- the work of the commission to proceed by separate stages. The United Nations last month passed a resolution establishing such a commission. The Secretary of State has pointed out, in this regard, that the provision as to safeguards in the resolution is intended to apply to all phases of any plan recommended by the United Nation's Atomic Energy Commission -- including the first stage.

Need for Prompt Action

The President, in his message to Congress of October 3rd on atomic energy gave warning against postponement of decisions and urged prompt action in passing legislation to cover domestic policy. Prompt action, as I see it, is needed for the following reasons:

1. For lack of a defined national policy, the organization that was built up during the war to carry forward the development of the atomic bomb is disintegrating. To allow this effective group of scientists, executives, engineers, and skilled workers to become lost to the field of atomic energy development would be nothing short of a calamity.

2. Before this nation proceeds any appreciable distance toward any specific international program it should put its domestic house in order. As we move forward along the lines of the Agreed Declaration of the President and the

on release of atomic energy, as required by considerations of national defense or military security.

The House Military Affairs Committee held hearings on the bill. It was freely criticized as a measure drafted by the military and intended to perpetuate military control of atomic energy, although the facts are that it was drafted by the committee of civilians named above and that it provides for transfer of responsibility from the War Department to a civilian agency. The House Committee, after adding several amendments including those further emphasizing freedom of research and investigation, reported the bill favorably.

I should add that the President, since introduction of the May-Johnson bill, has indicated that he is of the opinion that a number of changes should be made. The War Department will, of course, advocate such changes in discussion of any detailed legislation.

It was also realized by the War Department, prior to the time when the bombs were dropped, that the means of producing the atomic bomb would not forever remain the exclusive property of the United States, that in time other nations would be in a position to produce weapons utilizing atomic energy. Secretary Stimson was one of the first to recommend a policy of international supervision and control of the entire field of atomic energy, with a view to outlawing its utilization in war and to fostering world-wide exchange of information on atomic energy in connection with industrial and other peaceful purposes. I have been and still am of the same opinion as Secretary Stimson.

As the result of conferences on the international level, held last November and December and initiated by the President and the Secretary of State, the United States, Canada, United Kingdom and the Soviet Union joined in recommending to the United Nations that a commission be set up to study and make proposals on exchange of basic scientific information, on control of atomic energy to insure its use for only peaceful purposes, on elimination of atomic weapons from national armaments, and on effective safeguards by inspection and other means to protect complying states against violations and evasions, -- the work of the commission to proceed by separate stages. The United Nations last month passed a resolution establishing such a commission. The Secretary of State has pointed out, in this regard, that the provision as to safeguards in the resolution is intended to apply to all phases of any plan recommended by the United Nation's Atomic Energy Commission -- including the first stage.

Need for Prompt Action

The President, in his message to Congress of October 3rd on atomic energy gave warning against postponement of decisions and urged prompt action in passing legislation to cover domestic policy. Prompt action, as I see it, is needed for the following reasons:

1. For lack of a defined national policy, the organization that was built up during the war to carry forward the development of the atomic bomb is disintegrating. To allow this effective group of scientists, executives, engineers, and skilled workers to become lost to the field of atomic energy development would be nothing short of a calamity.

2. Before this nation proceeds any appreciable distance toward any specific international program it should put its domestic house in order. As we move forward along the lines of the Agreed Declaration of the President and the Prime Ministers of the United Kingdom and Canada of last November and the subsequent Resolution of the United Nations, other nations will look increasingly

MORE

2-B

to us for guidance in working out a secure system of international control. The sooner we establish domestic policy and an organization to carry out that policy and gain experience under peacetime conditions in supervising and controlling this field at home, the sooner we can help effectively to lead the way in shaping any international system.

3. Only by a vigorous program of fundamental research and the furtherance of basic knowledge and application in this field can we hope to advance adequately the usefulness of this new science. At present, the War Department has full control over the entire field. Continuation of this situation is not calculated to advance fully the research and development of peacetime uses of atomic energy, for it is not the primary mission of the War Department to do so. The present uncertainty as to future policy should be cleared up without delay in order to prevent any hindrance to full development of peacetime uses of atomic energy.

Heads of legislation

The War Department is in accord with the policies outlined by the President in his letter of February 1st regarding legislation on this issue of critical importance:

1. A civilian commission for control of atomic energy, a three-man group devoting full time to the activity.

2. Government ownership of fissionable materials.

3. Availability of devices utilizing atomic energy by means of compulsory non-exclusive licenses under private patents and regulation of royalties,

4. Adequate provision for independent research and development.

5. Ultimate use of atomic energy for exclusively peaceful ends, by means of safe, effective international arrangement.

Military significance

I hope that the day is not distant when international controls for elimination of atomic weapons as instruments of war, together with effective safeguards to insure compliance by all nations, can be devised and put into operation, under auspices of the United Nations. That day has not yet come, however, and in the interval we are faced with the fact that the atomic bomb is the most potent weapon of war yet devised by man. It is plain that in the interval the place of the atomic bomb in the armament of this nation cannot be overstated.

S. 1717 contains a recognition of the military aspect of atomic power. Section 6 provides that the Commission shall do research and development in the military applications of atomic power (subject to international agreement in the future), shall have custody of all atomic bombs and other atomic weapons, and may produce them in the future to the extent directed by the President. In other words, while recognizing the military aspects of atomic energy, this bill does not recognize the direct concern of the armed services in atomic weapons.

The War Department cannot subscribe to these provisions which virtually exclude the armed services from all phases of military application of atomic energy. Under the bill the commission would have sole responsibility for all further research and development in the military field. The Army and Navy would be utter strangers to what was going on, as much so as the army and navy of a foreign power, although they might be called on to operate the weapons so developed, on short notice and without knowing what they were. There are no provisions requiring, authorizing or suggesting any consultation or contact with the War and Navy Departments on the many problems of national defense that are necessarily involved in the control of atomic energy.

of basic knowledge and application in this field can we hope to advance adequately the usefulness of this new science. At present, the War Department has full control over the entire field. Continuation of this situation is not calculated to advance fully the research and development of peacetime uses of atomic energy, for it is not the primary mission of the War Department to do so. The present uncertainty as to future policy should be cleared up without delay in order to prevent any hindrance to full development of peacetime uses of atomic energy.

Heads of legislation

The War Department is in accord with the policies outlined by the President in his letter of February 1st regarding legislation on this issue of critical importance:

1. A civilian commission for control of atomic energy, a three-man group devoting full time to the activity.

2. Government ownership of fissionable materials.

3. Availability of devices utilizing atomic energy by means of compulsory non-exclusive licenses under private patents and regulation of royalties,

4. Adequate provision for independent research and development.

5. Ultimate use of atomic energy for exclusively peaceful ends, by means of safe, effective international arrangement.

Military significance

I hope that the day is not distant when international controls for elimination of atomic weapons as instruments of war, together with effective safeguards to insure compliance by all nations, can be deviced and put into operation, under auspices of the United Nations. That day has not yet come, however, and in the interval we are faced with the fact that the atomic bomb is the most potent weapon of war yet devised by man. It is plain that in the interval the place of the atomic bomb in the armament of this nation cannot be overstated.

S. 1717 contains a recognition of the military aspect of atomic power. Section 6 provides that the Commission shall do research and development in the military applications of atomic power (subject to international agreement in the future), shall have custody of all atomic bombs and other atomic weapons, and may produce them in the future to the extent directed by the President. In other words, while recognizing the military aspects of atomic energy, this bill does not recognize the direct concern of the armed services in atomic weapons.

The War Department cannot subscribe to these provisions which virtually exclude the armed services from all phases of military application of atomic energy. Under the bill the commission would have sole responsibility for all further research and development in the military field. The Army and Navy would be utter strangers to what was going on, as much so as the army and navy of a foreign power, although they might be called on to operate the weapons so developed, on short notice and without knowing what they were. There are no provisions requiring, authorizing or suggesting any consultation or contact with the War and Navy Departments on the many problems of national defense that are necessarily involved in the control of atomic energy.

The War and Navy Departments are charged broadly with responsibility for the national defense. Unless it is proposed to relieve them of this responsibility or to cripple them in their performance of it, adequate provision should be made for their activity, in conjunction with the commission, in the military part of this field from which has come the most devastating weapon in existence, a weapon for which no defense is foreseen. Legislation in the field of atomic energy, under present day conditions and until there is firm assurance of effective international controls, should provide for direct participation by the War and Navy Departments in the military applications of atomic energy. The War Department has developed this point more fully in its formal report on the bill and will submit specific provisions along this line if the Committee desires to have them. Any other policy, in my opinion, is taking the greatest risks with the safety of the nation.

The War Department is also concerned about that portion of Section 6 which provides "The Commission is authorized and directed to have custody of all assembled or unassembled atomic bombs, bomb parts, or other atomic military weapons, **presently** . . . . . produced." The War Department urges that present stocks of atomic bomb components should remain in the hands of the military forces. Atomic bomb components have been produced by the Army and constitute a vital and integral part of the Army's ordnance, which should not, at this time, be removed from the nation's arsenal. Changes would of course be made in the event of disarmament of atomic bombs by effective international arrangement.

There is one other matter relating to the national security on which I should like to comment. I firmly believe that scientific research and discovery must be actively encouraged if we are to remain strong in this field. The highest interests of the nation require that our knowledge of nuclear phenomena must be greatly expanded. To this end I feel that any legislation that is adopted should lay down a policy of minimum interference with small-scale private research which does not involve the release of atomic energy in large amounts and that such legislation should not contain provisions which negate that policy. While S. 1717 announces a policy of "assisting and fostering private research and development on a truly independent basis to encourage maximum scientific progress," it contains, perhaps unintentionally, a series of severe restrictions on such research and development. It is submitted that S. 1717 should contain provisions similar to those of the amended May-Johnson bill which guard against interference with small-scale or university research. I consider this point of direct interest to the War Department, for we must advance if we are to remain strong.

Among the more important restrictions imposed by S. 1717 on small-scale independent research, which the War Department deems unnecessary, are the following:

1. All research is subject to reporting and inspection requirements.

2. All fissionable materials, however minor in amount and wherever used or produced — even in small-scale laboratory research — are owned by the Commission and subject to its control.

3. All uses of source materials, however minor, are subject to regulation and control by the Commission.

4. All experimental devices utilizing fissionable materials are subject to Commission license.

Security of Information.

It is of great importance that as much information as can be made available without prejudice to the national safety should be freely circulated. At the same time it is of vital importance that adequate means be provided for holding information secure in all cases where the release or communication of it would

... international controls, should provide for direct participation by the War and Navy Departments in the military applications of atomic energy. The War Department has developed this point more fully in its formal report on the bill and will submit specific provisions along this line if the Committee desires to have them. Any other policy, in my opinion, is taking the greatest risks with the safety of the nation.

The War Department is also concerned about that portion of Section 6 which provides "The Commission is authorized and directed to havd custody of all assembled or unassembled atomic bombs, bomb parts, or other atomic military weapons, **presently** . . . . . produced." The War Department urges that present stocks of atomic bomb components should remain in the hands of the military forces. Atomic bomb components have been produced by the Army and constitute a vital and integral part of the Army's ordnance, which should not, at this time, be removed from the nation's arsenal. Changes would of course be made in the event of disarmament of atomic bombs by effective international arrangement.

There is one other matter relating to the national security on which I should like to comment. I firmly believe that scientific research and discovery must be actively encouraged if we are to remain strong in this field. The highest interests of the nation require that our knowledge of nuclear phenomena must be greatly expanded. To this end I feel that any legislation that is adopted should lay down a policy of minimum interference with small-scale private research which does not involve the release of atomic energy in large amounts and that such legislation should not contain provisions which negate that policy. While S. 1717 announces a policy of "assisting and fostering private research and development on a truly independent basis to encourage maximum scientific progress," it contains, perhaps unintentionally, a series of severe restrictions on such research and development. It is submitted that S. 1717 should contain provisions similar to those of the amended May-Johnson bill which guard against interference with small-scale or university research. I consider this point of direct interest to the War Department, for we must advance if we are to remain strong.

Among the more important restrictions imposed by S. 1717 on small-scale independent research, which the War Department deems unnecessary, are the following:

1. All research is subject to reporting and inspection requirements.

2. All fissionable materials, however minor in amount and wherever used or produced — even in small-scale laboratory research — are owned by the Commission and subject to its control.

3. All uses of source materials, however minor, are subject to regulation and control by the Commission.

4. All experimental devices utilizing fissionable materials are subject to Commission license.

Security of Information.

It is of great importance that as much information as can be made available without prejudice to the national safety should be freely circulated. At the same time it is of vital importance that adequate means be provided for holding information secure in all cases where the release or communication of it would

MORE

plainly be prejudicial to the national safety. In determining what information would endanger national safety if released, common prudence requires that these agencies of government charged with responsibility for national defence, — the armed forces, — should be consulted. The announced policy of the United States is that the technical secrets of atomic bomb manufacture should be held secure. Security provisions of domestic legislation should reflect this policy and provide adequate means of protecting such information as long as circumstances require. There should not be a shadow of doubt on the Commission's authority and power to safeguard information of a secret character that is vital to the national defense.

S. 1717 places reliance on the Espionage Act. We are convinced that the Espionage Act is an inadequate instrument in this instance. The Espionage Act does not clearly prohibit the transmission of military information orally or by personal written communication even by present or former government employees unless actual subversive intent can be shown; nor does it prohibit the communication of information of military value that is discovered or developed by private persons. Prosecution under significant portions of the Espionage Act having to do with national defense information faces the difficult task of proving that the defendant obtained the information with intent or reason to believe that it would be used to injure the United States or to aid a foreign nation. Standing by itself, the Espionage Act is not enough.

It is strongly recommended that the Commission should be empowered to adopt whatever security regulations are found to be clearly necessary in terms of the national security. Basic scientific information should be freely disseminated, but the Commission should be empowered to define by reasonable regulations what is included in this concept, having due regard for the national interest. Domestic security policies and procedures should be consonant with whatever action is taken by the United Nations concerning the exchange of information. To make sure that security regulations are not excessive, they should be subject to approval by the President.

Conclusion

There are many other points in which it is believed that S. 1717 should be amended and clarified if it is to carry out effectively its announced objectives. They have no direct bearing on national security, however, and I should prefer not to discuss them in this statement. They are covered in the report that the War Department has prepared in response to the Committee's formal request. The report is now being processed through the Bureau of the Budget.

In conclusion, The War Department stands with those who desire the establishment of a sound and effective national policy for the development of atomic energy geared to the highest interests of the nation and of the world. Knowledge in this field must be greatly expanded, and to this end the War Department favors minimum interference with independent fundamental research consistent with requirements of national safety. We look forward to the day when this tremendous force may come to be used solely for peaceful purposes. We are convinced, however, that until such time as international arrangements and safeguards to make this goal effective have been worked out, stage by stage, legislation relative to atomic energy should make provision that the War and Navy Departments be consulted and take part in those phases of atomic energy relating to military application. We are also convinced that the power of the Commission to adopt adequate regulations for protection of information vital to the national defense should be stated in terms that admit of no doubt or debate. We urge that S. 1717 be amended to cover these essential matters.

END

DISTRIBUTION: N,Y, Sc, Speeches.

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

February 20, 1946

MEMORANDUM FOR THE PRESS:

Major General L. R. Groves, Officer in Charge of the Manhattan District issued the following statement today:

"There has been undue speculation as to whether my remarks to the effect that more security has been lost on the atomic bomb project in the past four weeks than was lost all during the war were related to the recent events reported from Canada involving leakage of information to foreign sources. They were not. My statement was prompted by the prevalence of loose talk and speculation within the United States leading to inadvertent but serious breaches of security."

END

DISTRIBUTION: N, Y.

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

March 4, 1946

IMMEDIATE RELEASE

MEDAL FOR MERIT PRESENTED TO EIGHT SCIENTISTS FOR WORK ON ATOMIC BOMB

The Honorable Robert P. Patterson, Secretary of War, today presented the Medal for Merit to eight scientists for "scientific distinction in connection with the development of the greatest military weapon of all time, the atomic bomb."

Those receiving the awards were: Dr. J. Robert Oppenheimer, California Institute of Technology, Pasadena, California, who was Director of the Atomic Bomb Project Laboratory in New Mexico; Dr. Arthur H. Compton, Chancellor Washington University, St. Louis, Missouri; Frank R. Creedon, 1207 Lafayette Building, Washington, D. C.; Dr. John Ray Dunning, Columbia University, New York City; Percival Cleveland Keith, Hydro-Carbon Research, Incorporated, New York City; Dr. Charles Allen Thomas, Vice-President of Monsanto Chemical Company, St. Louis, Missouri; Dr. Eugene Paul Wigner, Princeton University, Princeton, New Jersey; and Roger Williams, Vice-President, E. I. duPont de Nemours, Wilmington, Delaware.

Present at the ceremony in the Secretary of War's office in The Pentagon were General Thomas T. Handy, Deputy Chief of Staff; General Carl Spaatz, Commanding General, Army Air Forces; Major General Daniel Noce, Chief of Staff, Army Service Forces; Major General R. W. Hasbrouck, Deputy Chief of Staff, Army Ground Forces; Major General Leslie R. Groves, Commanding General Atomic Bomb Project, Manhattan Engineer District; Brigadier General Kenneth D. Nichols, District Engineer, Manhattan Engineer District; and other high-ranking War Department officials.

The citations, signed by President Truman, were read by Colonel Hugh M. Exton, aide to the Secretary of War, follow:

DR. J. ROBERT OPPENHEIMER for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in brilliant accomplishments involving great responsibility and scientific distinction in connection with the development of the greatest military weapon of all time, the atomic bomb. As director of the Atomic Bomb Project Laboratory in New Mexico, his great scientific experience and ability, his inexhaustible energy, his rare capacity as an organizer and executive, his initiative and resourcefulness, and his unswerving devotion to duty have contributed immeasurably to the successful attainment of the objective. Dr. Oppenheimer's accomplishments reflect great credit upon himself and upon the military service.

DR. ARTHUR H. COMPTON for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in brilliant accomplishments involving great responsibility and scientific distinction in connection with the development of the greatest military weapon of all time, the atomic bomb. As Director of the Metallurgical Project which carried out research at Chicago, Clinton Engineer Works and elsewhere, for the development of processes for the production of the new material, plutonium, which is fundamental in the operation of this staggering new instrument of warfare, his great scientific experience and ability, his sound judgment, his initiative and resourcefulness and his unswerving devotion to duty have contributed immeasurably to the successful attainment of the objective. Dr. Compton's accomplishments reflect great credit upon himself and upon the military service.

MR. FRANK R. CREEDON for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in brilliant accomplishments involving great responsibility and technical construction ability in connection with the

IMMEDIATE RELEASE

MEDAL FOR MERIT PRESENTED TO EIGHT SCIENTISTS FOR WORK ON ATOMIC BOMB

The Honorable Robert P. Patterson, Secretary of War, today presented the Medal for Merit to eight scientists for "scientific distinction in connection with the development of the greatest military weapon of all time, the atomic bomb."

Those receiving the awards were: Dr. J. Robert Oppenheimer, California Institute of Technology, Pasadena, California, who was Director of the Atomic Bomb Project Laboratory in New Mexico; Dr. Arthur H. Compton, Chancellor Washington University, St. Louis, Missouri; Frank R. Creedon, 1207 Lafayette Building, Washington, D. C.; Dr. John Ray Dunning, Columbia University, New York City; Percival Cleveland Keith, Hydro-Carbon Research, Incorporated, New York City; Dr. Charles Allen Thomas, Vice-President of Monsanto Chemical Company, St. Louis, Missouri; Dr. Eugene Paul Wigner, Princeton University, Princeton, New Jersey; and Roger Williams, Vice-President, E. I. duPont de Nemours, Wilmington, Delaware.

Present at the ceremony in the Secretary of War's office in The Pentagon were General Thomas T. Handy, Deputy Chief of Staff; General Carl Spaatz, Commanding General, Army Air Forces; Major General Daniel Noce, Chief of Staff, Army Service Forces; Major General R. W. Hasbrouck, Deputy Chief of Staff, Army Ground Forces; Major General Leslie R. Groves, Commanding General Atomic Bomb Project, Manhattan Engineer District; Brigadier General Kenneth D. Nichols, District Engineer, Manhattan Engineer District; and other high-ranking War Department officials.

The citations, signed by President Truman, were read by Colonel Hugh M. Exton, aide to the Secretary of War, follow:

DR. J. ROBERT OPPENHEIMER for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in brilliant accomplishments involving great responsibility and scientific distinction in connection with the development of the greatest military weapon of all time, the atomic bomb. As director of the Atomic Bomb Project Laboratory in New Mexico, his great scientific experience and ability, his inexhaustible energy, his rare capacity as an organizer and executive, his initiative and resourcefulness, and his unswerving devotion to duty have contributed immeasurably to the successful attainment of the objective. Dr. Oppenheimer's accomplishments reflect great credit upon himself and upon the military service.

DR. ARTHUR H. COMPTON for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in brilliant accomplishments involving great responsibility and scientific distinction in connection with the development of the greatest military weapon of all time, the atomic bomb. As Director of the Metallurgical Project which carried out research at Chicago, Clinton Engineer Works and elsewhere, for the development of processes for the production of the new material, plutonium, which is fundamental in the operation of this staggering new instrument of warfare, his great scientific experience and ability, his sound judgment, his initiative and resourcefulness and his unswerving devotion to duty have contributed immeasurably to the successful attainment of the objective. Dr. Compton's accomplishments reflect great credit upon himself and upon the military service.

MR. FRANK R. CREEDON for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in brilliant accomplishments involving great responsibility and technical construction ability in connection with the development of the greatest military weapon of all time, the atomic bomb. As Project Manager directing construction of one of the largest and most vital plants for the production of material for use on this project during a crucial stage of the

MORE

program, between 1944 and 1945, his driving force and energy, his technical experience and skill, his diplomatic handling of difficult situations, and his unswerving devotion to duty contributed immeasurably to the attainment of the objective. Mr. Creedon's accomplishments reflect great credit upon himself and upon the military service.

DR. JOHN RAY DUNNING for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in accomplishments involving great responsibility and scientific distinction in connection with the development of the greatest military weapon of all time, the atomic bomb. As a physical researcher he took a leading part in the initiation of the early phases of the project; then he was in charge of essential research in the development of the diffusion process for the separation of uranium, in the SAM Laboratories for the Manhattan Engineer District, Army Service Forces, and then he served as advisor to the contractor for full scale operation of his process. A physicist of national distinction, Dr. Dunning's sound scientific judgment, his initiative and resourcefulness, and his unselfish and unswerving devotion to duty have contributed significantly to the success of the Atomic Bomb project.

MR. PERCIVAL CLEVELAND KEITH for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in brilliant accomplishments involving grave responsibility and technical administrative ability in connection with the development of the greatest weapon of all time, the atomic bomb. As the active head of the Kellex Corporation, New York, leading a large organization in the development, design and engineering of the gas diffusion plant for the separation of Uranium 235, an essential ingredient of the atomic bomb, his rare technical ability, his initiative and resourcefulness, his exceptional capacity as an executive and his inspiring devotion to duty have contributed significantly to the success of the program. Mr. Keith's accomplishments reflect great credit upon himself and upon the military service.

DR. CHARLES ALLEN THOMAS for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in accomplishments involving great responsibility and scientific distinction in connection with the development of the greatest military weapon of all time, the atomic bomb. As Vice-President of the Monsanto Chemical Company, he served as directing head of the production of vital substances required by the bomb; and he also coordinated the research work on an important phase of the project for the Manhattan Engineer District, Army Service Forces. A chemist of national distinction, Dr. Thomas' sound scientific judgment, his initiative and resourcefulness, and his unselfish and unswerving devotion to duty have contributed vitally to the success of the Atomic Bomb project.

DR. EUGENE PAUL WIGNER for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in accomplishments involving great responsibility and scientific distinction in connection with the development of the greatest military weapon of all time, the atomic bomb. As physical researcher in the Metallurgical Laboratory at Chicago on the MET Project for the Manhattan Engineer District, Army Service Forces, he was one of those primarily responsible for the essential theoretical developments which led to the construction of the chain-reacting piles at Hanford Engineer Works. A theoretical physicist of international distinction, Dr. Wigner's sound scientific judgment, his initiative and resourcefulness, and his unselfish and unswerving devotion to duty have contributed significantly to the success of the Atomic Bomb project.

MR. ROGER WILLIAMS for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in brilliant accomplishments involving grave responsibility and technical administrative ability of the highest order in connection with the development of the greatest military weapon of all time, the atomic bomb. As Vice-President and Assistant General Manager, Explosives Department, E. I. duPont de Nemours and Company, in direct charge of the special organization set up by that company for carrying out its part of the work, his inspiring personal leadership and vision, his initiative and resourcefulness, his rare capacity as an executive and his unswerving devotion to duty have contributed significantly to the success of the Atomic Bomb project. Mr. Williams' accomplishments reflect great credit upon himself and upon the military service.

responsibility and scientific distinction in connection with the development of the greatest military weapon of all time, the atomic bomb. As a physical researcher he took a leading part in the initiation of the early phases of the project; then he was in charge of essential research in the development of the diffusion process for the separation of uranium, in the SAM Laboratories for the Manhattan Engineer District, Army Service Forces, and then he served as advisor to the contractor for full scale operation of his process. A physicist of national distinction, Dr. Dunning's sound scientific judgment, his initiative and resourcefulness, and his unselfish and unswerving devotion to duty have contributed significantly to the success of the Atomic Bomb project.

MR. PERCIVAL CLEVELAND KEITH for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in brilliant accomplishments involving grave responsibility and technical administrative ability in connection with the development of the greatest weapon of all time, the atomic bomb. As the active head of the Kellex Corporation, New York, leading a large organization in the development, design and engineering of the gas diffusion plant for the separation of Uranium 235, an essential ingredient of the atomic bomb, his rare technical ability, his initiative and resourcefulness, his exceptional capacity as an executive and his inspiring devotion to duty have contributed significantly to the success of the program. Mr. Keith's accomplishments reflect great credit upon himself and upon the military service.

DR. CHARLES ALLEN THOMAS for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in accomplishments involving great responsibility and scientific distinction in connection with the development of the greatest military weapon of all time, the atomic bomb. As Vice-President of the Monsanto Chemical Company, he served as directing head of the production of vital substances required by the bomb; and he also coordinated the research work on an important phase of the project for the Manhattan Engineer District, Army Service Forces. A chemist of national distinction, Dr. Thomas' sound scientific judgment, his initiative and resourcefulness, and his unselfish and unswerving devotion to duty have contributed vitally to the success of the Atomic Bomb project.

DR. EUGENE PAUL WIGNER for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in accomplishments involving great responsibility and scientific distinction in connection with the development of the greatest military weapon of all time, the atomic bomb. As physical researcher in the Metallurgical Laboratory at Chicago on the MET Project for the Manhattan Engineer District, Army Service Forces, he was one of those primarily responsible for the essential theoretical developments which led to the construction of the chain-reacting piles at Hanford Engineer Works. A theoretical physicist of international distinction, Dr. Wigner's sound scientific judgment, his initiative and resourcefulness, and his unselfish and unswerving devotion to duty have contributed significantly to the success of the Atomic Bomb project.

MR. ROGER WILLIAMS for exceptionally meritorious conduct in the performance of outstanding service to the War Department, in brilliant accomplishments involving grave responsibility and technical administrative ability of the highest order in connection with the development of the greatest military weapon of all time, the atomic bomb. As Vice-President and Assistant General Manager, Explosives Department, E. I. duPont de Nemours and Company, in direct charge of the special organization set up by that company for carrying out its part of the work, his inspiring personal leadership and vision, his initiative and resourcefulness, his rare capacity as an executive and his unswerving devotion to duty have contributed significantly to the success of the Atomic Bomb project. Mr. Williams' accomplishments reflect great credit upon himself and upon the military service.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, N, Citations.
5:00 P.M.

2-B

FUTURE RELEASE
PLEASE NOTE DATE

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E R E L E A S E

FOR RELEASE UPON DELIVERY

ADDRESS BY
THE HONORABLE ROBERT P. PATTERSON, SECRETARY OF WAR,
ON ATOMIC ENERGY
OVER THE COLUMBIA BROADCASTING SYSTEM
AND RADIO STATION WTOP, WASHINGTON, D.C.,
AT 10:45 P.M., EST, SATURDAY, MARCH 9, 1946.

The atomic bomb is an invaluable weapon in the American Arsenal of Democracy. Whatever is to be said about the control of atomic energy for the future, we must not forget that the atomic bomb hastened victory and saved thousands of lives. We used it in defense of demorcracy. W e are prepared to surrender it and all other weapons of war when the American people can be assured that the peace organization of the world is secure. By giving up the bomb before that time, however, we would be shirking our responsibility to ourselves and to all free men.

The War Department earnestly hopes that it will never again be necessary to drop an atomic bomb on any nation. We have confidence that the United Nations, in time, will set up a system which will minimize the need not only for atomic bombs but, indeed, for war itself.

It should be made clear at the outset that the War Department wholeheartedly supports the President's recommendation that atomic energy be controlled by a civilian angency. Several months before the bomb was actually used, Secretary of War Stimson appointed an all-civilian committee to assist him in making recommendations to the President on a plan of post-war organization to direct the future course of the United States in this field. Secretary Stimson and the members of this Committee were fully alive to the tremendous potentialities of atomic energy as a boon to mankind as well as its immediate impact as a weapon of war. These were the members of this committee:

Secretary Stimson, Chairman.
James F. Byrnes.
Will Clayton.
Ralph Bard.
George L. Harrison
Dr. Vannevar Bush
Dr. Karl T. Compton
Dr. James B. Conant

I know of no civilians possessing higher talent or greater concern for the highest and best interests of the nation than the members of this Committee. They were assisted by a group of four of the most eminent civilian scientists associated with the development of the atomic bomb: Drs. J. R. Oppenheimer, E. O. Lawrence, A. H. Compton and Enrice Fermi.

After months of study, the carefully weighed conclusions of the Committee on domestic policy for control and development of atomic energy were put into a bill, the May-Johnson bill, introduced in Congress on October 3. It provided for a separate agency, with broad powers to direct and control the development of all aspects of this new source of energy for the benefit of the whole nation. It divested the War Department of the responsibility which it had in this field during the war.

1-A

FOR RELEASE UPON DELIVERY

ADDRESS BY
THE HONORABLE ROBERT P. PATTERSON, SECRETARY OF WAR,
ON ATOMIC ENERGY
OVER THE COLUMBIA BROADCASTING SYSTEM
AND RADIO STATION WTOP, WASHINGTON, D.C.,
AT 10:45 P.M., EST, SATURDAY, MARCH 9, 1946.

The atomic bomb is an invaluable weapon in the American Arsenal of Democracy. Whatever is to be said about the control of atomic energy for the future, we must not forget that the atomic bomb hastened victory and saved thousands of lives. We used it in defense of demorcracy. W e are prepared to surrender it and all other weapons of war when the American people can be assured that the peace organization of the world is secure. By giving up the bomb before that time, however, we would be shirking our responsibility to ourselves and to all free men.

The War Department earnestly hopes that it will never again be necessary to drop an atomic bomb on any nation. We have confidence that the United Nations, in time, will set up a system which will minimize the need not only for atomic bombs but, indeed, for war itself.

It should be made clear at the outset that the War Department wholeheartedly supports the President's recommendation that atomic energy be controlled by a civilian angency. Several months before the bomb was actually used, Secretary of War Stimson appointed an all-civilian committee to assist him in making recommendations to the President on a plan of post-war organization to direct the future course of the United States in this field. Secretary Stimson and the members of this Committee were fully alive to the tremendous potentialities of atomic energy as a boon to mankind as well as its immediate impact as a weapon of war. These were the members of this committee:

Secretary Stimson, Chairman.
James F. Byrnes.
Will Clayton.
Ralph Bard.
George L. Harrison
Dr. Vannevar Bush
Dr. Karl T. Compton
Dr. James B. Conant

I know of no civilians possessing higher talent or greater concern for the highest and best interests of the nation than the members of this Committee. They were assisted by a group of four of the most eminent civilian scientists associated with the development of the atomic bomb: Drs. J. R. Oppenheimer, E. O. Lawrence, A. H. Compton and Enrice Fermi.

After months of study, the carefully weighed conclusions of the Committee on domestic policy for control and development of atomic energy were put into a bill, the May-Johnson bill, introduced in Congress on October 3. It provided for a separate agency, with broad powers to direct and control the development of all aspects of this new source of energy for the benefit of the whole nation. It divested the War Department of the responsibility which it had in this field during the war.

Meanwhile, after Hiroshima, when the public began to realize the implications of the release of atomic energy on a practical scale, this new development became the most discussed and thought about subject of our time.

MORE

1-B

The War Department realized that the scientists, who had been engaged in the atomic bomb project and were deeply concerned about the social effects of the release of atomic energy, could contribute importantly to public understanding. In order that any hesitancy on this score might be dispelled, on October 20 I issued a statement to the press in which I stated that - subject to the security requirement that nothing beyond the specific subject matter of the Smyth Report be brought into discussion - our scientists should feel free to join actively in public consideration of this question.

This the scientists have done in full measure.

All those who have wished to express their views have had plenty of time in which to do so. It is time, indeed it is past time, for decisions to be made.

I know that it has been charged that the War Department wants to remain in control of atomic energy. Those who make that charge seem to be completely unaware as to what the War Department has said on the point and of the whole purpose of the legislation introduced by the War Department. We have always been in favor of placing the responsibility for atomic energy in the hands of a civilian agency for two reasons.

First, as regards the international situation, I firmly believe that our best hope of a world at peace lies in a strong and unwavering support of the United Nations Organization. This requires full support of the resolution on atomic energy that was adopted by the United Nations Assembly last January. The resolution calls for a commission to study and to make proposals on exchange of scientific information, on control of atomic energy for only peaceful purposes, on elimination of atomic weapons from national armaments, and on effective safeguards by inspection and other means to protect complying states against violations and evasions. Any program put forward under this formula will provide that proper safeguards must accompany each stage of interchange. The sooner we establish domestic policy and an organization to carry out that policy and gain experience under the peacetime conditions in supervising and controlling this field at home, the sooner we can help effectively to lead the way in shaping an international system. By inaction, we would not be giving our full cooperation to our commitment.

Second, on the domestic side, it is obvious that only by a vigorous program of fundamental research and the furtherance of basic knowledge and application in this field under a separate civilian agency can we hope to advance adequately the usefulness of this new science. Continued control by the W ar Department over the entire field will not advance fully the development of its peacetime uses, for it is not the primary mission of the War Department to do so. Many of the problems are civilian in character. Atomic energy must be vigorously developed in all its aspects, and its peacetime uses should be pushed as fast as circumstances permit. We must advance if we are to remain strong.

I should like to point out what appears to me to be the one central fact which must be faced in any legislation that is enacted. We must recognize clearly that only the first step - although a most important one - has been taken along the road toward the eventual goal of a sound, workable, and secure system of international control of atomic energy for peaceful ends and the abolition of its use as a weapon of war. The first move has been made - the United Nations Organization has established a Commission to study this whole complex problem and to frame a plan whereby the goal may be achieved, stage by stage.

The importance of this first move cannot be over-emphasized. It is the lead for which the world has been waiting. It is in line with the view so eloquently expressed in a recent public article by Secretary Stimson in which he stated: "The United States must take the lead by holding out an open hand to other nations in a spirit of genuine trust and with a real desire for a thoroughgoing co-operative effort in meeting and solving this problem. Truly this is a time for greatness of heart and of purpose, and unless we demonstratate these qualities now, other nations cannot be expected to do so." Secretary Stimson first urged this view in the councils of our government last September. I supported it fully then; I fully support it now.

MORE

The start is an excellent one, but we have a long way to travel before our goal is reached. We cannot reach it alone. No other nation expects us to go this path alone. All nations must march together in good faith. This is evident from the provisions of the United Nations atomic energy resolution itself. We would put this nation, and indeed every peaceloving nation, in the direst peril if we did not take due precautions to guard vital knowledge and keep foremost in this field until we have in actual operation an effective system of international control.

With these points in mind, I should like to state as strongly as I can what the War Department feels are minimum considerations in any domestic legislation.

1. The legislation should establish a separate commission outside of the War Department with ample power to direct the development of atomic energy, vigorously, realistically, and in the best interests of the nation.
2. Provision should be made for direct participation by the War and Navy Departments in the military applications of atomic energy until we can be sure that no atomic bombs will be dropped on us. These Departments are charged with the responsibility for the national defense. In my judgment, any legislation which does not properly recognize this simple fact in this field from which has come the most devastating weapon of our time, - a weapon against which no defense is presently foreseen, - would be taking chances with the future existence of the nation and of every person in it. We must all hope and strive for the establishment of an effective, enforceable system of international controls and the emergence of a stable peaceful world within the framework of the United Nations. But until this is actually achieved, step by step, the War and Navy Departments must not be crippled. Our responsibility for peace requires that we remain militarily strong.
3. Security provisions of domestic legislation should reflect the announced policy of the United States that technical secrets of atomic bomb manufacture should be held secure. The War Department favors the widest possible dissemination of basic scientific information, consistent with considerations of national security. It believes that the legislation should say so. It also believes, however, that any agency that is established should have unquestioned power to guard any information, which it decides, is vital to the national security. This is a matter of highest responsibility not only to this nation but to the United Nations as well. It is consistent with our international commitments.

In urging these minimum considerations the War Department is convinced that it stands squarely behind the announced foreign policy of the United States and our commitments to the United Nations. I firmly believe that the course here advocated is a course which gives realism and substance to our promise to proceed along the path, step by step, with all other nations of like mind toward a world joined in the ways of peace, a world in which atomic energy will be only the beneficent servant of man.

<u>END</u>

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, N, Scientific, Speeches.
3-8-46; 4:30 PM

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

March 13, 1946

IMMEDIATE RELEASE

ATOMIC BOMB SCIENTISTS AWARDED MEDAL FOR MERIT

Dr. Richard Chace Tolman, Dean of the Graduate School, California Institute of Technology, Pasadena, California, and Dr. Robert Fox Bacher, Professor of Physics, Cornell University, Ithaca, New York, have been awarded Medals for Merit for their accomplishments in connection with the development of the atomic bomb, the War Department announced today.

The presentations were made by Major General Leslie R. Groves, chief of the Atomic Bomb Project.

The citation accompanying the medal awarded Dr. Tolman said of the recipient:

"As scientific adviser to the War Department's representative who directed this staggering project, his great technical experience and ability, his sound judgment, his unswerving devotion to duty and his incomparable initiative and resourcefulness have contributed immeasurably to the successful attainment of the objective. Dr. Tolman's accomplishments reflect great credit upon himself and upon the military service."

Of Dr. Bacher, the citation said:

"As Chief of the Experimental Physics Division, and later of the Bomb Physics Division, of the Los Alamos Laboratory, Manhattan Engineer District, Army Service Forces, he carried out important research and development of fundamental parts of the bomb. A physicist of national distinction, Dr. Bacher's sound judgment, his initiative and resourcefulness, and his unselfish and unswerving devotion to duty have contributed vitally to the success of the Atomic Bomb Project."

Both citations, signed by President Truman, described the atomic bomb as "the greatest military weapon of all time."

END

DISTRIBUTION: N. Y. Citations
10:45 A. M.

SUMMARY OF WAR DEPARTMENT PRESS CONFERENCE CONDUCTED BY THE HONORABLE ROBERT P. PATTERSON, SECRETARY OF WAR, ON ATOMIC ENERGY

Held 15 March 1946 at The Pentagon

STATEMENT BY MR. PATTERSON: So many questions have been asked me about the War Department policies on atomic energy I thought it might be a good thing to review what that policy is and always has been. I think that it has been commonly misunderstood, although I have stated it quite a number of times in the past. As I see it, there are three main features in War Department policy: Past, present, and future.

The first is this: That from the time the project was entrusted to the War Department in 1942, as a war project, we carried it on for the development of an atomic bomb down until the end of the war in August 1945. That was successful. I hardly need say that every man, woman and child in the United States knows it, the bombs were produced, and they played an important part in bringing the war in the Pacific to a close.

The second is the post-war development. It was foreseen by Secretary Stimson, in May 1945, that all the signs pointed to success in the development of the atomic bomb and it was foreseen that the end of the war might not be far off, and the Secretary had been advised that the project had very important non-war possibilities--possibilities of a tremendous character. So in view of development of a policy, postwar use of the project, Secretary Stimson appointed a committee with approval of the President to make recommendations as to post-war policy. I have named the committee a number of times, but I can name them again very quickly

Secretary Stimson, Chairman.
George L. Harrison, Special Assistant to the Secretary, was Vice-chairman. He is President of the New York Life Insurance Company.
James F. Byrnes, then a private citizen.
Will Clayton, Assistant Secretary of State.
Ralph Bard, Under Secretary of the Navy.

And three scientists who had very close contacts with the project:

Dr. Vannevar Bush, head of the Office of Scientific Research and Development.
Dr. James B. Conant, head of the National Defense Research Committee, also President of Harvard University.
Dr. Karl Compton, who was the head of the field service office of the Office of Scientific Research and Development, also National Institute of Technology.

Those are the eight members of the committee.

They were assisted by a scientific panel right from the project--fulltime men who had been preeminent in the project; Dr. Oppenheimer, Dr. Lawrence, Dr. Enrico Fermi, and Dr. Arthur H. Compton.

They recommended a policy of turning the project over promptly upon the termination of the war to a new agency, a civilian agency, to be charged with full development of atomic energy for the benefit of the entire nation, and also a policy of the fullest and freest discussion and circulation of knowledge on atomic energy that would be consistent with the national defense. Those policies were incorporated into a Bill, later known as the May-Johnson Bill, which made provisions along the lines of the points of policy I just mentioned.

The War Department, at that time, and ever since, has been committed to the principle of having atomic energy under control of a civilian agency; and it took the lead in the field. Such a policy, of course, meant that the War Department, itself, would be divested of further responsibility in the general field. I could

MORE

go over and show you statements made by me from last October when the Bill was introduced (the May-Johnson Bill) showing that that has at all times been our policy. But I can get it from the measures of the Bill, itself, for that matter. Many of the critics of the Bill have never read it.

When I testified, a few weeks ago on the McMahon Bill in the Special Senate Committee, I again said that the War Department favored the control of the project be placed in the hands of a civilian agency. The only two criticisms that I made in my statement of the McMahon Bill were these: In the first place, while it provided for further development of the military aspects of atomic energy by the commission (the proposed commission), it made no mention of any interests on the part of the armed forces in that phase of the work; it did not provide, in any fashion, for their participation or even having any information about those military phases. And the second comment that I made had to do with what the War Department deems to be inadequate provisions as to security or the preservation of those parts of the project that ought to be kept secret. This policy of the War Department, as I have just mentioned, on postwar development has, at all times, been in line with the policy announced by the President.

The President wrote a letter in October to Congress, and he wrote a letter in February to the Special Senate Committee; and our policies have always been in line with the points outlined by the President.

There is one further matter on this second phase that I have been mentioning: Last October a committee was appointed by General Groves to make recommendations as to the release of further technical information about the project. That committee was composed of eight eminent scientists, headed by Doctor Tolman, of California Institute of Technology. They have made their recommendations recently. The committee was appointed, as I said, last October. They have recently made recommendations as to a plan for release of further technical data. That has been approved, and the means for accomplishing this are being worked out now as rapidly as possible. (Subsequently, Mr. Patterson named these committee members to be: Dr. R. F. Bacher, Dr. A. H. Compton, Dr. E. O. Lawrence, Dr. J. R. Oppenheimer, Dr. F. H. Spedding, Dr. H. C. Urey, and Dr. Richard C. Tolman. The Secretary also stated later that the plan recommended by this committee had been approved by himself.)

The third phase of the War Department Policy is the international phase. Right after the cessation of hostilities in August, Secretary Stimson made record of his conclusion that the matter should be handled in such a way on an international basis that there should not be an armament race in atomic bombs, but that under international arrangement atomic energy should be developed for non-war uses.

As soon as I became Secretary of War, I made it clear that those were also my own views. The use of atomic bombs ought to be outlawed in warfare, and we should do everything in our power to promote the development of atomic energy for peaceful purposes. And the use of the United Nations Organization in that connection was brought up. Now, progress has been made along those lines, as you know. Until the time when we can be sure that safe and effective measures can be taken step by step along that path, it is necessary for the national defense of the United States the use of atomic bombs be deemed still a matter of national armament.

Highlights from questions by members of the Press and answers by the Secretary:

Mr. Patterson said, "the use of atomic bomb ought to be outlawed from warfare. All nations should covenant not to use it under UNO supervision . . . . I didn't mean that it should be unilateral; I meant all the way around--just the same thing that has been urged by us, Britain, Canada, and Russia in laying the thing before the UNO.

The Secretary further emphasized that the War Department stood for international control with a view to the abandonment of atomic energy as weapons of war, and full development of the atomic energy for industrial and other peaceful purposes on a cooperative basis among the nations. He further stated that the accomplishment of this was a responsibility of the Atomic Energy Commission of the United Nations Organization which is provided for but not completely organized.

MORE

The recommendations made to Secretary Patterson by the committee appointed by General Groves include "the release of further information of a technical character." Mr. Patterson added that the committee thoroughly approved of the release of the Smyth Report of August, 1945. The means by which this technical information is to be released is now being studied.

When asked to elaborate his statement "the attitude of the War Department has been misunderstood," the Secretary explained. "It has been frequently said that 'the War Department is for retention of military control over the whole field of atomic energy' whereas our policy has been at all times since the cessation of hostilities, that the responsibility for development of atomic energy along the broadest lines should be made the responsibility of a new civilian agency. In fact, we were the first ones to suggest it, as far as I know.

"It has also been said that the May-Johnson Bill provided for military participation in the Commission itself. It did not do that. All it said was 'that if the President employing the nine men saw fit, in his judgment, to appoint an Army or Navy officer, that would be within his choice and that it would be possible to do so. It did not provide for an appointment at all, or it did not require the President to appoint them.'"

Mr. Patterson reiterated that the War Department endorsed and stands by all five points in the President's letter to the Special Senate Committee, including the first point which was for civilian control of atomic energy.

When asked to make a comment on the Vandenberg-McMahon proposal, Mr. Patterson said, "The text of that I have not yet seen. When I was before the Special Senate Committee, I recommended that an amendment be made to the provision of that Bill so as to provide for military participation on the phase of the project that had to do with military application of atomic energy (later amplified to include development and manufacturing, use, storage, etc., of atomic weapons, bombs and other weapons)."

He repeated that he would be satisfied with the McMahon Bill if it had provisions more adequate with respect to security, and provided that the military should participate on matters of military application of atomic energy, and the President should have the final word on such provisions relating to military application of atomic energy.

When asked if he had endorsed the testimony of General Groves in his last appearance before the McMahon Committee, Mr. Patterson said he did not know what the testimony was and had never seen it. He further added that when requested by the Committee for cooperation in permitting General Groves and General Arnold to express their personal views before the Committee, he cooperated to that degree and that it was not the War Department policy to try to "muzzle our officers and tell them they couldn't state their personal views."

It was stated by a member of the press that many of the scientists seem to think that military participation in control of atomic energy would have a harmful effect on the development of atomic energy. Mr. Patterson replied, "I don't see how it could have. The broad field is still left entirely to the control of a civilian agency."

The question was raised as to what the War Department policy would be in the event that scientific information relative to peaceful uses of atomic energy were to overlap with military development. Mr. Patterson said, "I would not have the final word on that pronounced by the military members of the control committee. I think the President would have to make the decision."

END

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

April 9, 1946

IMMEDIATE RELEASE

HARVARD SCIENTIST AWARDED MEDAL FOR MERIT FOR ATOM BOMB WORK

Dr. George B. Kistiakowsky, a member of the faculty of the Department of Chemistry, Harvard University, Cambridge, Massachusetts, has been awarded the Medal for Merit for outstanding service in the development of the atomic bomb, the War Department announced today.

The presentation of the award was made by Major General Leslie R. Groves, Commanding Officer of the Manhattan Engineer District.

The citation which accompanied the award reads:

"Dr. George B. Kistiakowsky for exceptionally meritorious conduct in the performance of outstanding service to the War Department in connection with the development of the greatest military weapon of all time, the atomic bomb. Occupying the highly responsible position of Chief of the Explosives Division of the Los Alamos Laboratory, Manhattan Engineer District, Army Service Forces, he carried out essential research and development work on the behavior and use of high explosives. The sound scientific judgment, initiative and resourcefulness displayed by Dr. Kistiakowsky, coupled with his unselfish, unswerving devotion to duty have contributed vitally to the success of the atomic bomb project."

END

DISTRIBUTION: N, Y, Citations.
2:00 P.M.

DEPARTMENT OF STATE

FOR THE PRESS

APRIL 9, 1946
No. 235

The Department of State, on March 28, 1946, made public "A Report on The International Control of Atomic Energy". In the public discussion of the Report questions have arisen with respect to the denaturing of materials utilized in atomic explosives.

After consultation with the Department of State, Major General L. R. Groves called together a group, representative of the outstanding scientists connected with the Manhattan Project during the development of the atomic bomb and all of whom are still connected with the project either on a full time or consulting basis. This group has met and has just completed a conference in which the measure of safety afforded by the use of denaturants was discussed. They prepared among other papers a report which can be released without jeopardizing security. Their report is as follows:

"The possibility of denaturing atomic explosives has been brought to public attention in a recent Report released by the State Department on the international control of atomic energy. Because, for security reasons, the technical facts could not be made public, there has been some public misunderstanding of what denaturing is, and of the degree of safety that it could afford. We have thought it desirable to add a few comments on these points.

"The Report released by the State Department proposes that all dangerous activities in the field of atomic energy be carried out by an international authority, and that operations which by the nature of the plant, the materials, the ease of inspection and control, are safe, be licensed for private or national exploitation. The report points out that the possibility of denaturing explosive materials so that they 'do not readily lend themselves to the making of atomic explosives' may contribute to the range of licensable activities, and to the overall flexibility of the proposed controls. The Report does not contend nor is it in fact true, that a system of control based solely on denaturing could provide adequate safety.

"As the Report states, all atomic explosives are based on the raw materials uranium and thorium. In every case the usefulness of the material as an atomic explosive depends to some extent on different properties than those which determine its usefulness for peacetime application. The existence of these differences makes denaturing possible. In every case denaturing is accomplished by adding to the explosive an isotope, which has the same chemical properties. These isotopes cannot be separated by ordinary chemical means. The separation requires plants of the same general type as our plants at Oak Ridge, though not of the same magnitude. The construction of such plants and the use of such plants to process enough material for a significant number of atomic bombs would probably require not less than one nor more than three years. Even if such plants are in existence and ready to operate some months must elapse before bomb production is significant. But unless there is reasonable assurance that such plants do not exist it would be unwise to rely on denaturing to insure an interval of as much as a year.

"For the various atomic explosives the denaturant has a different effect on the explosive properties of the materials. In some cases denaturing will not completely preclude making atomic weapons, but will reduce their effectiveness by a large factor. The effect of the denaturant is also different in the peaceful application of the materials. Further technical information will be required, as will also a much more complete experience of the peacetime uses of atomic energy and its economics, before precise estimates of the value of denaturing can be formulated. But it

2-A

Report on The International Control of Atomic Energy". In the public discussion of the Report questions have arisen with respect to the denaturing of materials utilized in atomic explosives.

After consultation with the Department of State, Major General L. R. Groves called together a group, representative of the outstanding scientists connected with the Manhattan Project during the development of the atomic bomb and all of whom are still connected with the project either on a full time or consulting basis. This group has met and has just completed a conference in which the measure of safety afforded by the use of denaturants was discussed. They prepared among other papers a report which can be released without jeopardizing security. Their report is as follows:

"The possibility of denaturing atomic explosives has been brought to public attention in a recent Report released by the State Department on the international control of atomic energy. Because, for security reasons, the technical facts could not be made public, there has been some public misunderstanding of what denaturing is, and of the degree of safety that it could afford. We have thought it desirable to add a few comments on these points.

"The Report released by the State Department proposes that all dangerous activities in the field of atomic energy be carried out by an international authority, and that operations which by the nature of the plant, the materials, the ease of inspection and control, are safe, be licensed for private or national exploitation. The report points out that the possibility of denaturing explosive materials so that they 'do not readily lend themselves to the making of atomic explosives' may contribute to the range of licensable activities, and to the overall flexibility of the proposed controls. The Report does not contend nor is it in fact true, that a system of control based solely on denaturing could provide adequate safety.

"As the Report states, all atomic explosives are based on the raw materials uranium and thorium. In every case the usefulness of the material as an atomic explosive depends to some extent on different properties than those which determine its usefulness for peacetime application. The existence of these differences makes denaturing possible. In every case denaturing is accomplished by adding to the explosive an isotope, which has the same chemical properties. These isotopes cannot be separated by ordinary chemical means. The separation requires plants of the same general type as our plants at Oak Ridge, though not of the same magnitude. The construction of such plants and the use of such plants to process enough material for a significant number of atomic bombs would probably require not less than one nor more than three years. Even if such plants are in existence and ready to operate some months must elapse before bomb production is significant. But unless there is reasonable assurance that such plants do not exist it would be unwise to rely on denaturing to insure an interval of as much as a year.

"For the various atomic explosives the denaturant has a different effect on the explosive properties of the materials. In some cases denaturing will not completely preclude making atomic weapons, but will reduce their effectiveness by a large factor. The effect of the denaturant is also different in the peaceful application of the materials. Further technical information will be required, as will also a much more complete experience of the peacetime uses of atomic energy and its economics, before precise estimates of the value of denaturing can be formulated. But it seems to us most probable that within the framework of the proposals advanced in the State Department report denaturing will play a helpful part.

In

"In conclusion we desire to emphasize two points, both of which have been challenged in public discussion, 1. Without uranium as a raw material there is no foreseeable method of releasing atomic energy. With uranium, thorium can also be used. 2. Denaturing, though valuable in adding to the flexibility of a system of controls, cannot of itself eliminate the dangers of atomic warfare.

(Signed)

"L. W. Alvarez	J. R. Oppenheimer
R. F. Bacher	J. R. Ruhoff
M. Benedict	G. T. Seaborg
H. A. Bethe	F. H. Spedding
A. H. Compton	C. A. Thomas
Farrington Daniels	W. H. Zinn"

The background of the individuals who have signed this report follows below:

Dr. L. W. Alvarez, workd for the Manhattan Project on the development of the bomb, first at the Metallurgical Laboratory at Chicago and then as group leader at the Los Alamos Laboratory; now a Professor of Physics at the University of California Radiation Laboratory, where under the direction of Professor Ernest O. Lawrence he is engaged on fulltime work for the Manhattan Project.

Dr. R. F. Bacher, duing the development of the atomic bomb, Chief of the Physics Division at the Los Alamos Laboratory of the Manhattan District. He has returned to his professorship of Physics at Cornell University and still is a consultant to the Manhattan Project.

Dr. M. Benedict, head of an important division of the Kellex Corporation which designed the gaseous diffusion plant built at the Clinton Engineer Works for the Manhattan Project. He was formerly research chemist with the M. W. Kellogg Company and is now a consultant to the Manhattan Project.

Dr. H. A. Bethe, during the development of the atomic bomb, Chief ofthe Theoretical Physics Division at the Los Alamos Laboratory of the Manhattan District. He has returned to his professorship of Physics at Cornell University and still is a consultant to the Manhattan Project.

Dr. A. H. Compton, now as Chancellor, the head of the Washington University of St. Louis, formerly the director of the Metallurgical Laboratory of the Manhattan District and still a consultant to the project. It was the Metallurgical Laboratory at Chicago which developed the scientific basis for the plutonium process.

Dr. Farrington Daniels, director of the Metallurgical Laboratory of the Manhattan Project. This laboratory is operated by the University of Chicago and is continuing research and development work on atmic energy. He is on leave of absence from the University of Wisconsin where he is Professor of Chemistry.

Dr. J. R. Oppenheimer,

Dr. J. R. Oppenheimer, former Director of the Los Alamos Laboratory of the Manhattan District. It was at this laboratory that the atomic bomb itself was developed. He remains a consultant to the project, although he has returned to his professorships of Physics at the University of California at Berkeley and the California Institute of Technology at Pasadena. Dr. Oppenheimer was a member of the Board of Consultants which prepared "A Report on the International Control of Atomic Energy" for the Secretary of State's Committee on Atomic Energy.

Lt. Colonel John R. Ruhoff, prior to the organization of the Manhattan District, director of inorganic research and development at Mallinckrodt Chemical Works, an important officer in the Manhattan Project from the start, first in the development of processes and the procurement of raw materials, then as unit chief of the electromagnetic plant; presently heads the group handling declassification.

Dr. G. T. Seaborg, co-discoverer of plutonium, supervised for the Manhattan Project the general program on the basic chemistry of the heavy elements especially plutonium. At present he is engaged full time on further work of this nature for the Manhattan Project. He is on leave of absence from the University of California where he is Professor of Chemistry.

Dr. F. H. Spedding, Director of the Iowa State College Laboratory, which, among other things, developed the successful method for the production of uranium metal for the Manhattan Project and which is continuing work for the project. Dr. Spedding is also Professor of Chemistry at Iowa State College.

Dr. C. A. Thomas, Vice President of the Monsanto Chemical Company, general overall chemical advisor for the Manhattan Project in the development of the atomic bomb. He also had complete charge of all phases of Monsanto's work in connection with the project, and is still in complete charge of their continuing work for the Manhattan Project in research and development of atomic energy for peacetime applications. Dr. Thomas was a member of the Board of Consultants which prepared "A Report on the International Control of Atomic Energy" for the Secretary of State's Committee on Atomic Energy.

Dr. W. H. Zinn, a project leader at the Metallurgical Laboratory of the Manhattan Project during the early days of pile development. He is now director of the Argonne Laboratory, which is operated by the University of Chicago for the Manhattan Project. Experimental pile work is conducted in this laboratory. He was former Assistant Professor of Physics at City College of New York.

* * *

FUTURE RELEASE

PLEASE NOTE DATE

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E   R E L E A S E

FOR RELEASE IN P.M. PAPERS, TUESDAY, APRIL 30, 1946

MANHATTAN DISTRICT ENLISTED MAN
AWARDED SOLDIER'S MEDAL

Withheld during the war because of the secrecy surrounding the development of the atomic bomb, the Soldier's Medal has been awarded to Technician Third Grade John D. Hoffman, of 6402 Maple Avenue, Chevy Chase, Maryland.

Major General Leslie R. Groves, Commanding General of the Manhattan Engineer District, presented the award to Technician Third Grade Hoffman who, on September 2, 1944, assisted to safety three victims of a violent explosion in a building used for hazardous chemical experiments at the Naval Research Laboratory in the Philadelphia Navy Yard.

Graduating with honors at the age of 19 from Franklin & Marshall College, Lancaster, Pennsylvania, Technician Third Grade Hoffman worked at the Bureau of Standards for two years before entering the Army. He worked at the Philadelphia Navy Yard in September, 1944, and subsequently was assigned to Oak Ridge, Tennessee, and the University of Chicago. He will be discharged May 1, 1946.

The citation accompanying the award follows:

"Technician Third Grade (then Private) John D. Hoffman, 33905194, Army of the United States, assigned to Naval Research Laboratory, Philadelphia Navy Yard, did on 2 September 1944 upon witnessing a violent explosion in a building used for hazardous chemical experiments enter the danger area and assist three victims to safety. His quick and courageous actions under chaotic conditions were indicative of heroism in the highest degree".

END

DISTRIBUTION: N, Y, Citations.
4-29-46

JOINT ARMY-NAVY TASK FORCE NUMBER ONE

OPERATION CROSSROADS -- RELEASE NO. 46

FOR RELEASE WITH PICTURES
TO PRESS AND RADIO AT
VICE ADMIRAL BLANDY'S PRESS CONFERENCE
2:30 P.M. (E.S.T.), MAY 13, 1946

FULL STORY OF ATOMIC BOMB TESTS WILL BE TOLD TO PUBLIC

. . . . . .

Vice Admiral W. H. P. Blandy, U.S.N., Commander Joint Army-Navy Task Force One, announced today that observers and representatives of the press would be able to view the general arrangement of the target vessels and other military equipment in Bikini Atoll. While technical details will not be disclosed, the press will see the target array, both before and after the tests, and both from the surface and from the air.

This is but one step being taken to insure that the public has fullest confidence that the experiments are being conducted purely as fact-finding scientific tests for future guidance with no intent to "prove" or "disprove" any present-day theories concerning military, air and naval strategy and tactics. All possible facts consistent with National security will be released so that the public will not await the results with the misconception that these tests alone will once and forever establish whether there will be a great or small air force, navy or ground force.

Early in the planning stages of the tests it was clearly recognized that no one test or series of tests could at the same time:

(a) Simulate war conditions,

(b) Provide the data which are desired from the purely scientific point of view, and

(c) Provide the data which are essential if military and naval strategists, engineers, designers and medical officers are to have the information they need in order to proceed along sound and economical lines in developing our Armed Forces.

The basic directives require that the tests provide the essential data required by the Armed Forces. The tests are primarily planned, therefore, to determine and to measure with precision what happens at various distances whan an atomic bomb is used against ships and other items of military equipment such as tanks, airplanes, radio sets, etc. Much information of value to pure science will also be obtained, and, where practicable, duplication or simulation is made of typical operating conditions.

The arrangement of the ships in the target array for the first test was reached after the many factors affecting the problem were carefully analyzed by the Army and Navy and by civilian scientists. The array agreed upon is considered the best which will obtain the maximum of valuable information.

It is so arranged that (a) maximum damage will be inflicted on the cluster of ships at the point of aim by one airplane dropping one bomb, and (b) a progressive decrease in damage will be inflicted on ships at increasing distances from the explosion to a point where it is intended that almost negligible damage will be encountered by ships farthest from the aiming point.

Some of the ships and target material, at considerable distances from the point of aim in the first test, can probably be placed in satisfactory condition to be close to the point of detonation in the second test. This aspect was considered in the arrangement of the target array.

Some of the smaller ships have little significance from the point of view of measuring effects of blast on the ships themselves but are stationed at measured distances in order to form platforms on which recording instruments and cameras may be installed.

Typical conditions will be approximated by loading the ships with varying degrees of combat supplies such as fuel oil, gasoline, bombs, ammunition, torpedoes, etc. The ship loadings will vary from some almost full to some almost empty, which is the normal situation with ships at sea and at anchor both in war and peace.

However, there is no thought of simulating an "attack" by atom-bomb-loaded airplanes against a disposition of ships at sea or at anchor in a harbor. This should be very clear from the diagram of the approximate target array to be used in the first test which is furnished herewith. This diagram shows relative locations of ships, and closely approximates the expected exact location of each ship. It should be remembered, however, that the final locations of the ships at the time of the tests will depend on such factors as the direction of the wind and the length of anchor chain, as ships riding to a single anchor will swing to the wind in a circle a quarter mile or more in diameter.

Also furnished is a diagram showing a portion of a carrier task force at sea and a typical anchorage plan, drawn to exactly the same scale and compared to the target array diagram for the Bikini Atoll test.

Simulation of actual bombing attack conditions is also precluded by the fact that only one bomb is used and by several other factors. More than a score of ships are concentrated within a circle of 1,000 yards radius at the center of the Bikini array for two principal reasons: First, to insure doing major damage to a capital ship even if the bomb does not detonate exactly over the bullseye, and, second, to provide a positively identifiable point of aim to the bombardier from a high bombing altitude. Other steps being taken to place the bomb over the aiming point with the extreme accuracy required in this test and not normally available or essential under war conditions include: Painting the battleship NEVADA at the center a bright red-orange, installing a radar beacon on the NEVADA, providing special destroyer station ships as navigation checks for the bomber's approach, and using precise radar methods for obtaining accurate wind data at all altitudes over the target.

The bomb which will be used in both of the tests in 1946 is the "standard" type. This is the type which was used at Nagasaki. It is the best type which we have available and that is the reason it is being used. There is no desire on the part of the Joint Chiefs of Staff or the personnel conducting the CROSSROADS Operation to "hold back" a more powerful bomb. If a more powerful bomb were now available, it would be employed.

For reasons of security, the President has decreed that all information connected with the development, manufacture, operational techniques and characteristics of the atomic bomb be kept a secret of the United States. For related security reasons the information outlined below cannot be made public:

(a) The exact point of detonation of the bomb with respect to the point of aim of the target array.

(b) The altitude at which the bomb is detonated.

(c) The exact bearings and distances at which the ships are stationed with respect to each other.

(d) The special equipment and techniques used by the airplane involved in dropping this bomb.

(e) The exact pressures, temperatures and other data obtained at various distances from the point of burst.

(f) The degree of efficiency of the explosion.

(It is conceivable that the bomb might be almost a "dud" or have a very "efficient" high-order detonation. With our present limited knowledge of atomic fission, there is a range of possibilities between these two extremes which cannot be accurately foretold or measured. Whether or not determined, no official announcement is contemplated as to the factor of efficiency of explosiòn obtained.)

(g) Large numbers of detailed photographs showing bomb damage.

(Photographs produce exact and measurable records; analysis of large numbers of related photographs of bomb damage can evolve much precise information. While the press representatives who write for publication and broadcast by radio will be permitted to do so without censorship of their copy, the national security requires that all photographs be reviewed for security and that the information obtainable from photographs of damage be limited. Representative pictures showing damage will be released as soon as practicable after the tests, some by radio photo from Bikini. These pictures will be selected to provide the public with a true graphic record of the general effects of the test. Only such identification of ships and viewpoints in the photographs will be released as will not prejudice the security interests of our country.)

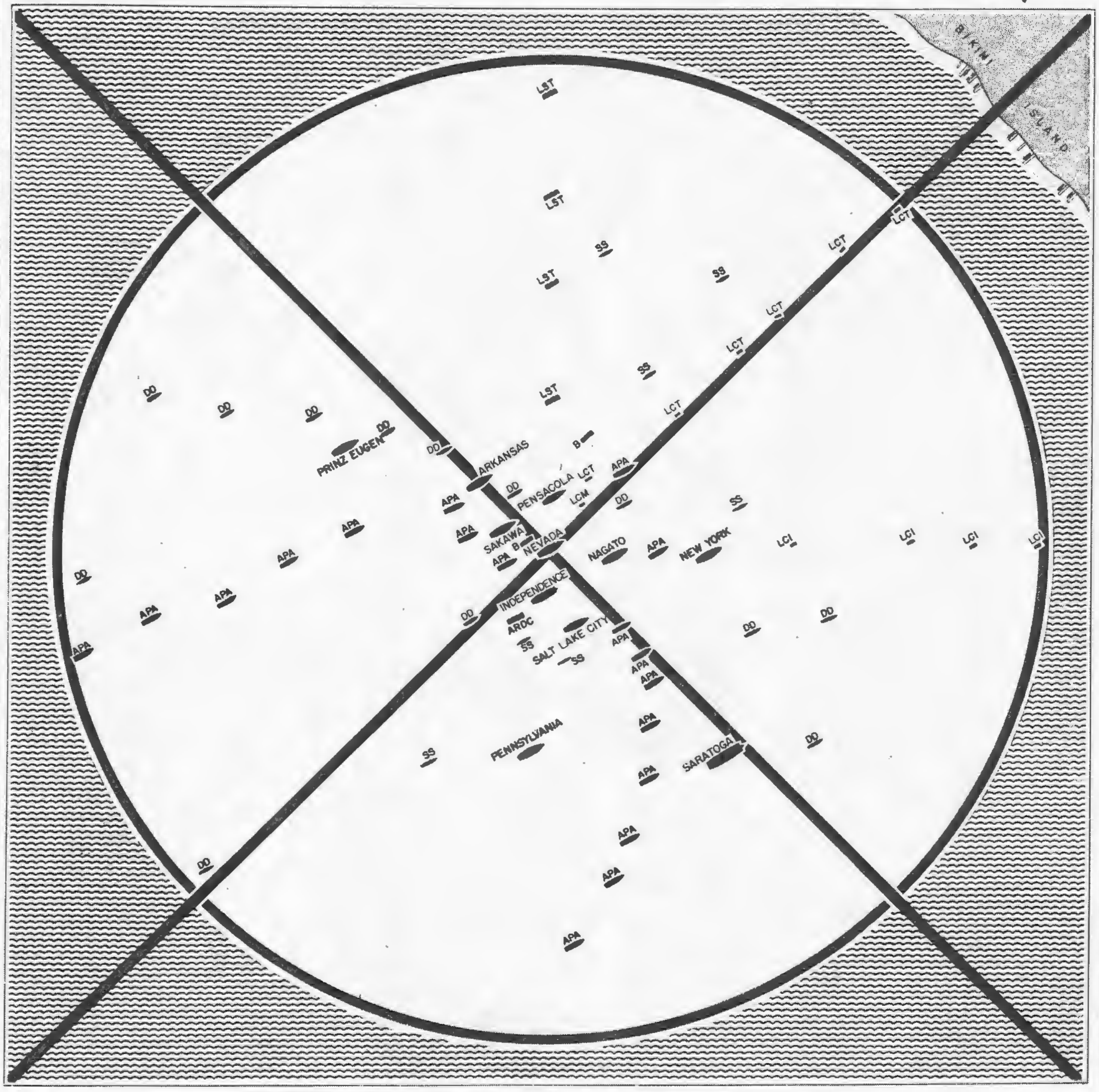
The evaluation of the information obtained from the Bikini tests will take many months. Intelligent progress toward world peace as an enduring condition on our planet may be jeopardized if the public of the world at large, as a result of the headlines made by the tests, jumps to hasty and possibly erroneous conclusions as to the effects of atomic attacks against ships and military material. No sound conclusions can be reached prior to a studied evaluation of the results of the tests by the Joint Chiefs of Staff. To assist them in this evaluation the Joint Chiefs of Staff have appointed a Board of civilian, military, and naval experts who have also been available to Commander Joint Army-Navy Task Force One for advice during the major part of the planning and execution of Operation CROSSROADS.

***

"OPERATION CROSSROADS"

FIRST ATOMIC BOMB TEST

APPROXIMATE DISPOSITION OF SHIPS IN TARGET ARRAY AT BIKINI



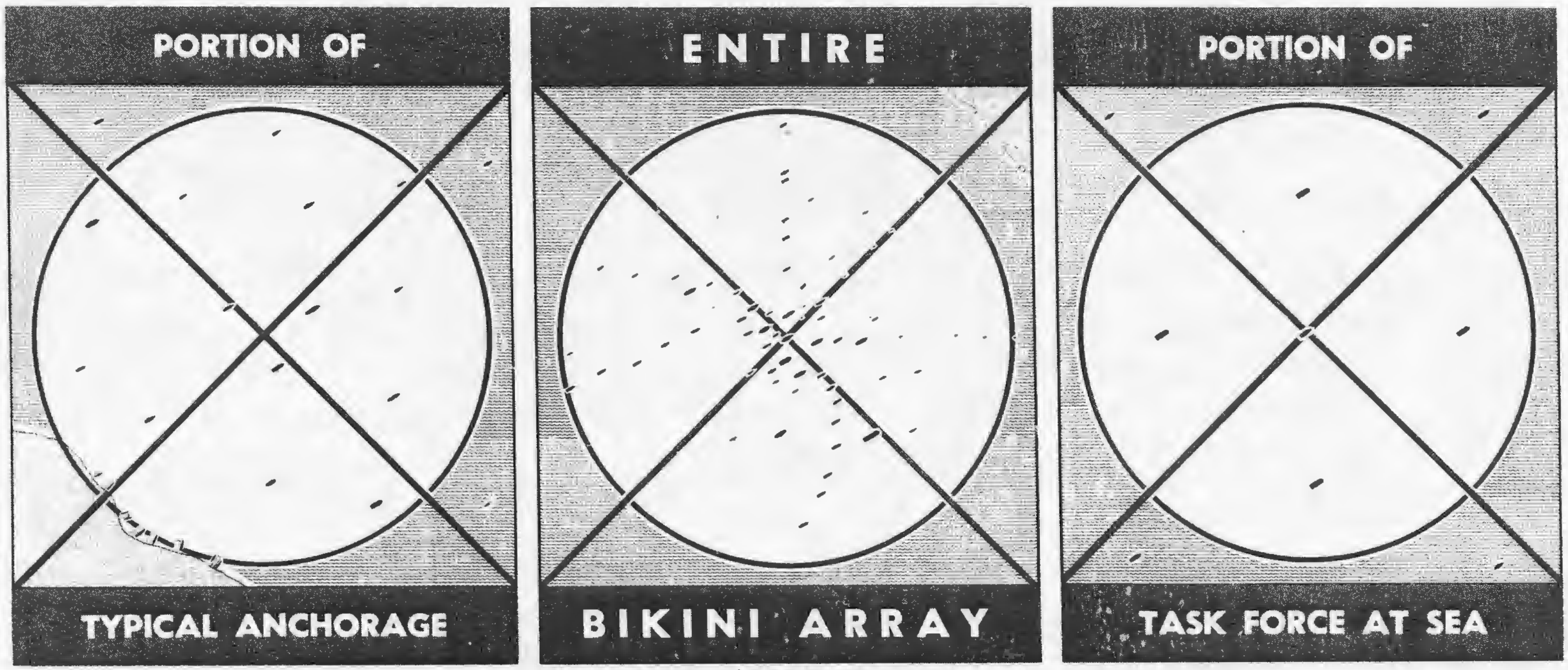
DD	DESTROYER	LST	LANDING SHIP TANK	LCM	LANDING CRAFT MECHANIZED
SS	SUBMARINE	LCI	LANDING CRAFT INFANTRY	ARDC	FLOATING DRYDOCK
APA	ATTACK TRANSPORT	LCT	LANDING CRAFT TANK	B	BARGE

JOINT ARMY - NAVY TASK FORCE ONE

"OPERATION CROSSROADS"

FIRST ATOMIC BOMB TEST

**CONCENTRATED SHIPS IN TARGET ARRAY AT BIKINI
COMPARED WITH TWO NORMAL WARSHIP ARRANGEMENTS**



ARRANGEMENT AND CONCENTRATION OF SHIPS AT BIKINI INSURES GRADUATED DAMAGE

JOINT ARMY - NAVY TASK FORCE ONE

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

May 15, 1946

IMMEDIATE RELEASE

JOINT ARMY-NAVY RELEASE

The Army and Navy Munitions Board, which is charged with formulating plans for the industrial mobilization of the country in the event of an emergency, has undertaken a survey of underground sites throughout the nation which might be utilized for long-term storage of machine tools and war production equipment and which, if necessary, may be adaptable in war-time for vital industrial production and other military purposes.

The survey is only one phase of the extensive program being carried on by the Board which consists of the Board's Executive Chairman, Mr. Richard R. Deupree, President of Procter and Gamble, and a distinguished industrialist; the Under Secretary of War, the Honorable Kenneth C. Royall; and the Assistant Secretary of the Navy, the Honorable W. John Kenney. The Executive Chairman is the chief executive of the Board. Its operating personnel are chosen from specially qualified officers and civilians from the War and Navy Departments.

It is the responsibility of this Board, working with other government departments and industrial management and labor groups, to make plans which will best assure the national security, and full application of the nation's economic strength toward meeting military requirements in the shortest possible time in the event of an emergency.

The War and Navy Departments have no present intention of recommending the placement of any industries underground. It is the primary purpose of this survey to locate underground sites suitable for the safe and economical storage of many of the vital items of machine tools and mechanical equipment owned by the government which would otherwise require extensive surface storage facilities. In the course of this study, in addition to the storage feature, the survey may develop certain sites which, in the event of an emergency, would be particularly adaptable for housing vital industries should this step become necessary.

Army engineers, working under the direction of a special committee of the Board, will do the actual cataloging of the underground areas and will grade them according to their various characteristics. Both natural caves and man-made caverns such as mines are to be studied.

Among the characteristics to be recorded are floor space, ceiling, humidity, overhead cover, soil and rock conditions, access approaches and general interior conditions. Other factors which will be considered are concealment from aerial observation, and proximity to transportations, communications, utilities and housing facilities.

The Board's Committee on underground sites functions as a coordinating agency between the War and Navy Departments and other government and private agencies with regard to planning for the use of underground areas. At the

MORE

conclusion of t survey, the Committee will make recommendations to the Board on the extent to which the use of underground areas is desirable, and on the practicability of placing industrial machinery and materials in such locations. In addition, the Committee will estimate construction and alteration costs for any program recommended.

Meanwhile, other special committees of the Board are proceeding with programs designed eventually to simplify and standardize the problems of industrial mobilization.

Among the more important is the Strategic Materials Committee, comprised of representatives of the War and Navy Departments and the Departments of State, Treasury, Interior, Agriculture, and Commerce, and the Civilian Production Administration. This Committee makes recommendations as to what materials are to be classified as strategic and critical, and how funds made available by the Congress for the purchase of stockpile materials are to be utilized. It recommends the kinds, quantities, and specifications of such critical materials.

Another activity is the Joint Army and Navy Specifications Board, its objective being the coordination and development of joint Service specifications on items, materials, processes, and standards issued by the War and Navy Departments. Wherever possible, this Board will establish joint Army-Navy standards for capacity, dimensions, and test.

The Joint Procurement Assignment Committee investigates for the Board existing or potential duplications of procurement between the two Services. Where appropriate, it recommends to the Board the assignment of the responsibility for purchase of specific items or classes of items to either the War Department or to the Navy Department. It also recommends appropriate standardization of items or classes of items between the Army and Navy.

The Board has also set up an Industrial Facilities Committee which is to advise on all matters related to the establishment of such facilities for the peacetime Army and Navy and nucleus for operation and expansion in case of a future emergency. The Committee will make recommendations on legislation required to place War or Navy Department or Reconstruction Finance Corporation-owned industrial facilities into the active or standby categories of the peacetime program, on the designation of industrial facilities that should be included in the program under the ownership of the War or Navy Departments, the selection of basic industries that should be included in the program, and the coordination required with civilian industry to supplement the program.

Another Committee coordinates the activities of the Army Packaging Board and the Navy Packaging Board to resolve differences between them. It insures to the greatest extent feasible the adoption of uniform instructions related to packaging and packing, insures a uniform interpretation of specifications and recommends, where necessary, the revision of such specifications.

The Ordnance Procurement Committee was established by the Board to consider joint ordnance procurement problems in light of the experiences of World War II. Its objective is to bring about maximum standardization and maximum practical economies from joint procurement or single procurement for both services.

Other Committees of the Board deal with lumber, the procurement of medical and surgical equipment and supplies, requirements of basic and raw materials, components and end products, and the procurement and standardization of marine equipment and supplies.

END

DISTRIBUTION: Aa, Af, B, D(except Do), G, K, L, M, N, 25-88369-60
11:15 AM

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH, AAF
Tel. - RE 6700
Ext. 74783 and 74344

May 21, 1946

IMMEDIATE RELEASE

LAST SHIPMENT ENROUTE TO TASK GROUP 1.5 FOR ATOM TEST AT BIKINI

Establishment of Task Group 1.5 as an operational unit at Kwajalein and embarkation of the last shipment of personnel and equipment to this unit have completed the preparatory mission of the "Operations Crossroads" Office in the Strategic Air Command at Bolling Field, Brigadier General Frederic H. Smith, Jr., Chief of Staff, said today.

Charged with the responsibility of supervising and expediting the manning, equipping, training, and preparing for overseas movement of Task Group 1.5, the SAC "Crossroads Office," headed by Lieutenant Colonel Brian "Shanty" O'Neill, accomplished its task in a "highly commendable fashion, particularly in face of the time element and the difficulties presented by rapid demobilization," General Smith said.

Preliminary Army Air Forces preparation for the atomic bomb tests required that the Strategic Air Command unit fill the personnel requirements of 422 officers and 3237 enlisted specialists, deliver 10,000 tons of diversified equipment to ports of embarkation, and obtain 40 specially modified aircraft for participation in the event.

The SAC Operations Crossroads office was established at Bolling Field on January 15, 1946, under what was then the Continental Air Forces. The immediate task was the establishment of a manning table for Task Group 1.5 and the transfer of qualified personnel to this group at Roswell, New Mexico. The entire AAF was combed to secure the necessary specialists remaining in the rapidly demobilized organizations.

Project officers were appointed in the major depots of the country to help meet the March 1 sailing date for the initial 8,000 tons of material, including maintenance, communication, ordnance, photo laboratory, and other necessary equipment.

Colonel O'Neill and his staff also provided the necessary training facilities and equipment for the Task Group at Roswell and made periodic checks on the progress of this training.

Finally the Strategic Air Command unit prepared the movement orders to the Pacific for Task Group 1.5 and accomplished the delivery of all personnel and equipment to the Port of Embarkation.

On Colonel O'Neill's staff were Lieutenant Colonel W. O'Hern, Hennessey, Oklahoma; Lieutenant Colonel J. H. Bell, Oil City, Pennsylvania; Major J. H. Inghan, San Leandro, California; Major K. A. Linklater, Hillsboro, Oregon; Captain Michael Alessandro, Temple, Texas; Lieutenant Arline Walker, New York City, and Private first class Helen P. Keuther, Cincinnati, Ohio.

Colonel O'Neill, of New York City, was wing commander of the 309th Heavy Bomb Wing with the Fifth Air Force in the South Pacific during the war. He was awarded the Distinguished Service Cross, Legion of Merit, and Air Medal during his two tours of duty as a pilot of a Martin B-26 Marauder and a North American B-25 Mitchell.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dg, Dm, E, Ea, N.
3:30 P.M.

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH, AAF
Tel. RE 6700
Ext. 74783 and 74344

May 28, 1946

IMMEDIATE RELEASE

MAJ. GEN. LEMAY PLANS
PITTSBURGH ADDRESS

Major General Curtis E. LeMay, Deputy Chief of the Air Staff for Research and Development, will discuss "The Atomic Bomb and Future Air Development" at a "Peaks of Progress" breakfast, June 1, in Pittsburgh.

A group of scientists and educators will attend the breakfast, which is an annual fete in commemoration of progress achieved by mankind in the preceding year.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dg, Dm, E, Ea.
4:15 PM

FUTURE RELEASE
PLEASE NOTE DATE

WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E   R E L E A S E

FOR RELEASE IN AFTERNOON PAPERS OF WEDNESDAY JUNE 12, 1946.

SEE A-BOMB SHOCK WAVES
RENDERING CAVES USELESS

Shock-wave studies which may make even caverns deep underground untenable in atomic war are being carried on at the Ordnance Ballistics Research Laboratory at Aberdeen Proving Ground, Maryland, the War Department announced today.

Using complicated electrical hookups, laboratory scientists are examining shock waves in connection with atomic fission experiments, and will apply what already is known to lessons learned at next month's A-bomb explosion at Bikini Atoll, in mid-Pacific.

Colonel Leslie E. Simon, director of the Aberdeen Laboratory, asserted that after results of the Bikini blast are compiled, "we can determine at what height an A-bomb should be exploded to crush solid rock to a depth of 150 to 200 feet."

Heretofore, deep underground installations were believed to be the only effective preventative measure against an atomic explosion.

The studies, which are based on the performance of shock waves in both earth and water, are a continuation of experiments made during the war on shock waves in air, according to Colonel Simon.

A twenty-four channel recording cathode ray oscillograph is used in determining the extent of the shock waves.

The Ordnance Section of Operation Crossroads, which will observe the effects of the A-bomb at Bikini, had its blast instruments calibrated, special instruments built and its crew trained at Aberdeen Proving Ground.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm N.
6-10-46

FUTURE RELEASE

PLEASE NOTE DATE

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E   R E L E A S E

FOR RELEASE FRIDAY A.M., JUNE 14, 1946

FIRST PEACETIME APPLICATION OF ATOMIC RESEARCH
BECOMES IMMEDIATELY POSSIBLE UNDER ARMY PROGRAM

The first peacetime application of the results of wartime atomic research becomes immediately possible with announcement today of the availability of radioisotopes for biological and medical research.

Manhattan Engineer District of the War Department, which developed the atomic bomb, made public the details of a program for the nationwide distribution of the beneficial radioactive isotopes to be produced from the uranium chain-reacting "atom pile" at the Clinton Engineer Laboratories, Oak Ridge, Tennessee.

The announcement is a major step forward in the Army's plan to make available as rapidly as possible the full benefits of the long secret undertaking. It is the fourth in a series to bring about the maximum utilization for non-military purposes of the war's major scientific development. Previous announcements have dealt with the Clinton Laboratories experiments on electric power generation, the extensive atomic research program to be carried out at Hanford, Washington, by General Electric Company, and the ordering of a 100-million volt betatron--atom smasher--for Oak Ridge.

The radioactive isotopes to be made available will be used in research work in fundamental and applied sciences, particularly in biology and medicine. They have been generally heralded as making possible the greatest peacetime benefits to result from atom researches. They will be used in two important ways: First as tracer atoms or "tracers," for following the course of atoms in chemical, biological and technical processes; and possibly second, after considerable research, as therapeutic agents for treatments of certain special diseases.

Distribution will be coordinated and supervised by an Advisory Committee on Isotope Distribution Policy, members of which were appointed by Major General L. R. Groves, Chief of the Manhattan Project, on the recommendation and nomination by the National Academy of Sciences. To judge radioisotopes' requests and recommend distribution, this Advisory Committee will have sub-Committees on Allocations and on Human Applications. A technical committee on isotopes composed of representatives from the major laboratories of the Manhattan Project will aid the Project in coordinating production and development of requested isotopes.

The announcement, which followed many months of coordinated effort among scientists of the Manhattan Project at the Government facilities at Clinton Laboratories, at the University of California, at the University of Chicago and Iowa State College, in developing methods and arranging for production, said that the increased and general distribution of the radioactive isotopes may well have far-reaching importance in peacetime research in physics, chemistry, metallurgy and the medical sciences.

The radioisotopes--which are radioactive forms of common elements with the same chemical properties of the stable element but having a different atomic weight--will be prepared largely in the Clinton Laboratories operated for the Army by the Monsanto Chemical Company. The bombardment facilities of the Hanford Engineer works at Pasco, Washington, now operated by the du Pont Company and which will be taken over by the General Electric Company around September 1 will also be used

1-A

Brs. 3425 and 4860

FUTURE RELEASE

FOR RELEASE FRIDAY A.M., JUNE 14, 1946

FIRST PEACETIME APPLICATION OF ATOMIC RESEARCH BECOMES IMMEDIATELY POSSIBLE UNDER ARMY PROGRAM

The first peacetime application of the results of wartime atomic research becomes immediately possible with announcement today of the availability of radio-isotopes for biological and medical research.

Manhattan Engineer District of the War Department, which developed the atomic bomb, made public the details of a program for the nationwide distribution of the beneficial radioactive isotopes to be produced from the uranium chain-reacting "atom pile" at the Clinton Engineer Laboratories, Oak Ridge, Tennessee.

The announcement is a major step forward in the Army's plan to make available as rapidly as possible the full benefits of the long secret undertaking. It is the fourth in a series to bring about the maximum utilization for non-military purposes of the war's major scientific development. Previous announcements have dealt with the Clinton Laboratories experiments on electric power generation, the extensive atomic research program to be carried out at Hanford, Washington, by General Electric Company, and the ordering of a 100-million volt betatron--atom smasher--for Oak Ridge.

The radioactive isotopes to be made available will be used in research work in fundamental and applied sciences, particularly in biology and medicine. They have been generally heralded as making possible the greatest peacetime benefits to result from atom researches. They will be used in two important ways: First as tracer atoms or "tracers," for following the course of atoms in chemical, biological and technical processes; and possibly second, after considerable research, as therapeutic agents for treatments of certain special diseases.

Distribution will be coordinated and supervised by an Advisory Committee on Isotope Distribution Policy, members of which were appointed by Major General L. R. Groves, Chief of the Manhattan Project, on the recommendation and nomination by the National Academy of Sciences. To judge radioisotopes' requests and recommend distribution, this Advisory Committee will have sub-Committees on Allocations and on Human Applications. A technical committee on isotopes composed of representatives from the major laboratories of the Manhattan Project will aid the Project in coordinating production and development of requested isotopes.

The announcement, which followed many months of coordinated effort among scientists of the Manhattan Project at the Government facilities at Clinton Laboratories, at the University of California, at the University of Chicago and Iowa State College, in developing methods and arranging for production, said that the increased and general distribution of the radioactive isotopes may well have far-reaching importance in peacetime research in physics, chemistry, metallurgy and the medical sciences.

The radioisotopes--which are radioactive forms of common elements with the same chemical properties of the stable element but having a different atomic weight--will be prepared largely in the Clinton Laboratories operated for the Army by the Monsanto Chemical Company. The bombardment facilities of the Hanford Engineer Works at Pasco, Washington, now operated by the du Pont Company and which will be taken over by the General Electric Company around September 1 will also be used insofar as the flexibility of that operation allows. In addition, the Argonne National Laboratory, to be operated for the Army by the University of Chicago under the general guidance of representatives of some twenty-five participating universities, will aid materially in pertinent research.

MORE

1-B

In accordance with the policies recommended by the non-project advisory group only qualified institutions such as accredited hospitals, universities, recognized research laboratories including industrial research laboratories, and clinical investigation groups will be able to obtain the radioactive material. An additional qualification will require all groups using the isotopes for fundamental research or applied science to publish or otherwise make available their findings, thereby promoting further applications and scientific advances.

The Manhattan District has set up a special Isotopes Branch in its Research Division to administer and coordinate the distribution program in cooperation with the scientific committees nominated by the National Academy of Sciences. Dr. Paul C. Aebersold, formerly of the Project's Radiation Laboratory of the University of California and formerly engaged in work with cyclotron-produced radioisotopes, was named chief of the branch.

A group of scientists working at Clinton Laboratories has been doing extensive research to develop suitable production methods. These methods are necessarily far from simple; they deal with minute quantities of the end product and are most difficult, somewhat hazardous and costly to produce. The availability of radioactive isotopes from the Project for non-project distribution, it was pointed out, is possible only through the research, development and production efforts of the many technical personnel in all parts of the Project.

The basis for the final plans for the distribution program was given a number of months ago when the National Academy of Sciences, at General Groves' request, nominated a representative committee of outstanding scientists to recommend policies and help make arrangements for a scientifically desirable distribution of radioactive isotopes to non-project groups. General Groves felt "most strongly" that the Project should not, without strong outside scientific aid, undertake to determine eligibility and policy on distribution matters concerning non-project organizations. It was on that basis that the National Academy of Sciences nominated the Interim Advisory Committee on Isotope Distribution Policy, headed by Dr. Lee DuBridge, in charge of the Physics Department of the University of Rochester and who recently was appointed to become president of the California Institute of Technology at Pasadena.

It was pointed out by Dr. Aebersold, Project coordinator of the distribution program which is being announced, that the program is an unprecedented effort on a national scale and that many problems are expected which will have to be handled as they arise.

In this connection, it was emphasized that it will probably be impossible to meet all of the demands of the country until additional pile facilities are built specifically for radioactive isotope production. This is not contemplated in the immediate future. It was also stated that it might be possible, although no production scale steps have been taken, for the electromagnetic facilities developed for concentrating U-235 at Oak Ridge to enter the isotope production program in the future by concentrating non-radioactive stable isotopes. Concentrated stable isotopes can be used as tracer atoms by means of a mass spectrometer system. They are also uniquely valuable in studying properties of the atomic nucleus. Present plant equipment is not immediately suitable for concentration of desired isotopes on a wide scale, and the processes are still very expensive.

Under the program being announced, approximately one hundred radioactive isotopes will be obtainable in varying quantities. Some of the most important of these include Carbon 14, Sulphur 35, Phosphorus 32 and Iodine 131. The numbers following the name of the element refer to the mass of the isotope, that is to the total of protons plus neutrons in the nucleus. Ordinarily stable carbon consists of isotopes of mass 12 and 13, Sulphur of 32, 33 and 34, Phosphorus of 31 and Iodine of 127.

Since Carbon is one of the principal elements found in organic material, the Isotope Carbon 14 is expected to give great impetus to the study of all organic processes including the mechanism and growth of normal and abnormal tissues and all plant and animal functions. In the medical field, at least initially, isotopes

The Manhattan District has set up a special Isotopes Branch in its Research Division to administer and coordinate the distribution program in cooperation with the scientific committees nominated by the National Academy of Sciences. Dr. Paul C. Aebersold, formerly of the Project's Radiation Laboratory of the University of California and formerly engaged in work with cyclotron-produced radioisotopes, was named chief of the branch.

A group of scientists working at Clinton Laboratories has been doing extensive research to develop suitable production methods. These methods are necessarily far from simple; they deal with minute quantities of the end product and are most difficult, somewhat hazardous and costly to produce. The availability of radioactive isotopes from the Project for non-project distribution, it was pointed out, is possible only through the research, development and production efforts of the many technical personnel in all parts of the Project.

The basis for the final plans for the distribution program was given a number of months ago when the National Academy of Sciences, at General Groves' request, nominated a representative committee of outstanding scientists to recommend policies and help make arrangements for a scientifically desirable distribution of radioactive isotopes to non-project groups. General Groves felt "most strongly" that the Project should not, without strong outside scientific aid, undertake to determine eligibility and policy on distribution matters concerning non-project organizations. It was on that basis that the National Academy of Sciences nominated the Interim Advisory Committee on Isotope Distribution Policy, headed by Dr. Lee DuBridge, in charge of the Physics Department of the University of Rochester and who recently was appointed to become president of the California Institute of Technology at Pasadena.

It was pointed out by Dr. Aebersold, Project coordinator of the distribution program which is being announced, that the program is an unprecedented effort on a national scale and that many problems are expected which will have to be handled as they arise.

In this connection, it was emphasized that it will probably be impossible to meet all of the demands of the country until additional pile facilities are built specifically for radioactive isotope production. This is not contemplated in the immediate future. It was also stated that it might be possible, although no production scale steps have been taken, for the electromagnetic facilities developed for concentrating U-235 at Oak Ridge to enter the isotope production program in the future by concentrating non-radioactive stable isotopes. Concentrated stable isotopes can be used as tracer atoms by means of a mass spectrometer system. They are also uniquely valuable in studying properties of the atomic nucleus. Present plant equipment is not immediately suitable for concentration of desired isotopes on a wide scale, and the processes are still very expensive.

Under the program being announced, approximately one hundred radioactive isotopes will be obtainable in varying quantities. Some of the most important of these include Carbon 14, Sulphur 35, Phosphorus 32 and Iodine 131. The numbers following the name of the element refer to the mass of the isotope, that is to the total of protons plus neutrons in the nucleus. Ordinarily stable carbon consists of isotopes of mass 12 and 13, Sulphur of 32, 33 and 34, Phosphorus of 31 and Iodine of 127.

Since Carbon is one of the principal elements found in organic material, the Isotope Carbon 14 is expected to give great impetus to the study of all organic processes including the mechanism and growth of normal and abnormal tissues and all plant and animal functions. In the medical field, at least initially, isotopes will yield their greatest benefits not directly in treatment of disease but as tools for finding the causes of diseases.

Phospho , which is important in plant and animal metabol . and human hemotology, is also expected to reveal many biological secrets through experimental use of its isotope--Phosphorus 32. At the same time, Sulphur 35 may be used in tracing reactions of sulpha drugs. Radioiodine is valuable because of its specific incorporation in thyroxin and thus can be used to study functions of the thyroid gland. These isotopes may also be useful as tracers in industrial chemistry and metallurgy.

The availability of radioisotopes, means of requesting, and arrangements for their allocation and distribution are now being announced in technical detail in the publications of the American Association for the Advancement of Science. (The publication SCIENCE) Briefly, the procedure follows:

a. All requests must be initiated from accredited research groups or educational institutions.

b. All requests will be initially received by the Isotopes Branch, Research Division, Manhattan District, P. O. Box E, Oak Ridge, Tennessee, where a technical review will be initiated on each request in regard to all technical questions arising between the supplier and the applicant.

c. Each request will then be referred to the Allocation sub-Committee, which will have the responsibility of advising on the allocation and distribution of isotopes according to the scientific value of the proposed research. The sub-Committee will operate under the supervision of the Advisory Policy Committee which was nominated by the National Academy of Sciences.

d. Requests for material for use in humans will be referred to a sub-Committee on Human Applications which will have final veto power on any distribution suggested for human applications.

e. Small "Panels of Consultants" in a number of specialized fields of possible applications of isotopes will be appointed to afford advice as deemed necessary on scientific matters connected with requests.

f. Effective liaison will be established between the Manhattan Project technical groups and the associated advisory groups whose functions are described.

A reasonable charge will be made for all isotopes to cover the "out-of-pocket" costs to the United States resulting from the additional production incurred by the non-project distribution. Prices will be determined on the basis of projected, routine production processes. Although many isotopes are expensive to produce, especially if desired in a pure form, research-program quantities of important isotopes should not be prohibitively expensive to the average scientific institution. It is planned to make materials available more rapidly and in greater quantity as well as to reduce costs, by supplying the bombarded material when possible without subsequent chemical processing by the Project.

Many radioactive isotopes were available from cyclotrons before the war but in limited quantities. While a pile cannot produce as many varieties of radioactive isotopes as a cyclotron, because it can only bombard with neutrons while cyclotrons can use many nuclear projectiles, a pile can far outdistance a cyclotron in quantity production of certain isotopes. For some things, like Carbon 14, the pile can be made equivalent in production to hundreds of cyclotrons.

The paucity of isotopes under the cyclotron processes before the war limited the scope of research done and the number of persons using radioisotopes. Nevertheless, many important results, particularly in biology and medicine, came from the use of the isotopes available. Now, with the prospect of radioactive isotopes being made available on a large scale, even more important advances are expected in all sciences by their use.

More than 400 man-made radioactive isotopes are now known. There is at least one such radioisotope for each element. The "Trans-plutonium" elements, 95 and 96, are radioisotopes recently found in Project researches. The work in connection with the Plutonium Project of the Atomic Bomb Development has resulted in the production, or possibility of production, of a considerable number of radioactive isotopes but [illegible] the publications of the American Association for the Advancement of Science. (The publication SCIENCE) Briefly, the procedure follows:

a. All requests must be initiated from accredited research groups or educational institutions.

b. All requests will be initially received by the Isotopes Branch, Research Division, Manhattan District, P. O. Box E, Oak Ridge, Tennessee, where a technical review will be initiated on each request in regard to all technical questions arising between the supplier and the applicant.

c. Each request will then be referred to the Allocation sub-Committee, which will have the responsibility of advising on the allocation and distribution of isotopes according to the scientific value of the proposed research. The sub-Committee will operate under the supervision of the Advisory Policy Committee which was nominated by the National Academy of Sciences.

d. Requests for material for use in humans will be referred to a sub-Committee on Human Applications which will have final veto power on any distribution suggested for human applications.

e. Small "Panels of Consultants" in a number of specialized fields of possible applications of isotopes will be appointed to afford advice as deemed necessary on scientific matters connected with requests.

f. Effective liaison will be established between the Manhattan Project technical groups and the associated advisory groups whose functions are described.

A reasonable charge will be made for all isotopes to cover the "out-of-pocket" costs to the United States resulting from the additional production incurred by the non-project distribution. Prices will be determined on the basis of projected routine production processes. Although many isotopes are expensive to produce, especially if desired in a pure form, research-program quantities of important isotopes should not be prohibitively expensive to the average scientific institution. It is planned to make materials available more rapidly and in greater quantity as well as to reduce costs, by supplying the bombarded material when possible without subsequent chemical processing by the Project.

Many radioactive isotopes were available from cyclotrons before the war but in limited quantities. While a pile cannot produce as many varieties of radioactive isotopes as a cyclotron, because it can only bombard with neutrons while cyclotrons can use many nuclear projectiles, a pile can far outdistance a cyclotron in quantity production of certain isotopes. For some things, like Carbon 14, the pile can be made equivalent in production to hundreds of cyclotrons.

The paucity of isotopes under the cyclotron processes before the war limited the scope of research done and the number of persons using radioisotopes. Nevertheless, many important results, particularly in biology and medicine, came from the use of the isotopes available. Now, with the prospect of radioactive isotopes being made available on a large scale, even more important advances are expected in all sciences by their use.

More than 400 man-made radioactive isotopes are now known. There is at least one such radioisotope for each element. The "Trans-plutonium" elements, 95 and 96, are radioisotopes recently found in Project researches. The work in connection with the Plutonium Project of the Atomic Bomb Development has resulted in the production, or possibility of production, of a considerable number of radioactive isotopes but more important is the fact that this development has given rise to vastly superior methods for the production of many isotopes. As is now well known, the uranium chain-reacting units, called "piles," have given rise to the transmutation of elements on a weighable scale of not only micrograms, milligrams, or grams but even kilograms in some cases.

MORE

NON-PROJECT ADVISORY COMMITTEES ON ISOTOPES
(Nominated by National Academy of Sciences)

Interim Advisory Committee on Isotope Distribution Policy:

Dr. Lee A. Du Bridge - Chairman
University of Rochester, Rochester, New York

Dr. Merle A. Tuve
Carnegie Institution, 5241 Broad Branch Rd., N. W., Washington, D. C.

Professor Linus G. Pauling
Chemistry Department, California Institute of Technology, Pasadena, California

Dr. Vincent du Vigneaud
Cornell University Medical College, York Avenue and 69th Sts., New York, New York

Dr. Raymond E. Zirkle
Department of Botany, University of Chicago, Chicago, Illinois

Dr. A. Baird Hastings
Department of Biochemistry, Harvard Medical School, Cambridge, Massachusetts

Dr. Cecil J. Watson
University Hospital, University of Minnesota, Minneapolis, Minnesota

Dr. Cornelius P. Rhoads
Memorial Hospital, 444 E. 68th St., New York, New York

Dr. Zay Jeffries
General Electric Company, 1 Plastics Avenue, Pittsfield, Massachusetts

Dr. L. F. Curtiss
National Bureau of Standards, Department of Commerce, Washington, D. C.

Dr. Paul C. Aebersold - Secretary

Sub-Committee on Allocation and Distribution:

Dr. K. T. Bainbridge, Chairman, Physicist,
Harvard, Boston, Massachusetts

Dr. J. G. Hamilton, M. D. and Biologist,
University of California, Berkeley, California

Dr. Joseph W. Kennedy - Chemist,
Washington University, St. Louis, Missouri

Sub-Committee on Human Applications:

Dr. Andrew Dowdy - Chairman,
University of Rochester, Rochester, New York

Dr. Hymer Friedell,
Western Reserve University, Cleveland, Ohio

Dr. Gioacchina Failla,
Columbia University, New York, New York

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, N, Sc.

FUTURE RELEASE
PLEASE NOTE DATE

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E R E L E A S E

FOR RELEASE IN P.M. PAPERS, FRIDAY, JUNE 14, 1946

OPERATIONS CROSSROADS TO TEST
ORDNANCE MATERIAL, AMMUNITION

Plans and preparations for Army Ordnance participation in the OPERATION CROSSROADS, are being made with as much thoroughness as those for an amphibious invasion of enemy territory. The Joint Army and Navy Atomic bombings at Bikini Atoll will test the reaction to atomic blasts of over 100 different Ordnance materiel and ammunition items as well as the U.S. Navy vessels which carry them.

When OPERATIONS CROSSROADS was proposed, it was decided to form Army Technical Groups parallel to those of the Navy to coordinate all items to be tested by Atomic bombing. Colonel J. D. Frederick, Infantry, was appointed Commanding Officer of the Army Ground Group, with Colonel J. H. Weber, Ordnance Department, former Chief of the Rocket Division at Aberdeen Proving Ground, as his Executive Officer.

The Ordnance Section of OPERATION CROSSROADS will consist of a Technical Staff of five officers especially qualified in various types of Ordnance materiel and nine test teams. Each team will be commanded by an officer and will consist of enlisted specialists in tanks, automotive vehicles, artillery, fire control equipment, small arms, aircraft armament, and ammunition. Lieutenant Colonel Sidney F. Musselman of Cynthiana, Kentucky has been appointed Chief of the Ordnance Section.

Ordnance equipment will be assigned to nine ships in the Crossroads target array holding positions ranging from the immediate vicinity of the atomic blast to the estimated extreme radius of damage.

Identical 200 ton sets of Ordnance items will be loaded on the USS NEVADA, USS ARKANSAS, USS PENNSYLVANIA and the USS SARATOGA. All the ammunition will be transported to the Pacific on the USS ARTEMIS, and there divided into five identical lots and transferred to five LST's.

Compared with the atomic bomb, ordinary ordnance projectiles have the potency of cream puffs; but it was decided to separate the materiel items from the ammunition shipments in order to obtain a true evaluation of the damage done to vehicles and weapons by the atomic blast without benefit of minor local explosions.

A minimum number of items of ordnance materiel and ammunition has been selected to exemplify all types of materiel and ammunition. Forty-five different items of material and 99 of ammunition, including anti-tank mines, bombs, and artillery ammunition of all kinds, will be tested. Each item has been

MORE

battle tested, with the exception of a special 4000-pound bomb that is being prepared for the test.

Materiel items will be exposed on ship deck in field operating conditic Ammunition will be displayed in several stages of preparation. Some will be packed in original shipping containers as it is stored in ammunition dumps; some in bulk containers; and the rest will be exposed in operating condition just as it is used by the troops.

Ordnance experts can only speculate as to the results of the experiment They know that Ordnance items, such as tanks and artillery, have been constr ted to stand up under severe battle strain. But the atomic bombings will produce conditions entirely different from any which have existed during pre tests.

The atomic blast is not an ordinary explosion. Ordinary bomb blasts de a few thousand degrees of temperature while the atomic blasts will develop temperature running into the millions. Atomic pressure is enormously greate than that produced by any other means because the bombs pack more energy tha any other known object of like size can hold.

Because of the importance of the experiment, the Ordnance Department ha combed its personnel throughout the Pacific and the United States to secure thoroughly qualified specialists to take part in the operation.

The team commanders have already been briefed in Washington, D. C. rega the scope of the operation and their duties and responsibilities. Training the teams will take place at the ports and aboard the ship. Each specialist will execute and maintain individual records of each piece of equipment, cov its maintenance, inspection and repair. Photos will be made of the equipmen before the detonation of the atomic bombs. Immediately after the test, ordn teams will make detailed inspections and prepare complete reports of effects the explosion. Staff officers will coordinate the team reports into a compl historical record of the Ordnance phase of the Crossroads Operation.

Representative samples of all Ordnance materiel subjected to the bomb w be returned to Ordnance arsenals and laboratories in the United States for m exhaustive study than is possible in the field. Effects of the atomic bomb visible to the naked eye which alter the strength, stability or functioning characteristics of materiel will be recorded and included in the final report

Lieutenant Colonel Herbert H. Daubert, of Houston, Texas and New York Ci has been appointed to the Technical Staff in charge of Tank and Automotive eq ment;Major Gilvary P. Grant of Salt Lake City, Utah will represent Small Arms and Aircraft Armament materiel on the staff; Major Leon E. Clark, Birmingham, Alabama will control all Army Fire Control Equipment; Captain Ernest B. Bucha Boston, Massachusetts will have charge of all Ammunition and Captain Austin Haley, Seattle, Washington has been appointed to the Technical staff in charg of Artillery materiel and general operations.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dg, Dm, E, Ea, N, Sc.
6-12-46

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 3425 and 4860

June 26, 1946

MEMORANDUM FOR THE PRESS:

The following press release issued by the War Department Public Relations Division for use in Sunday papers of June 30, 1946, may be published or broadcast at any time after 6:00 P.M., EST, Saturday June 29, 1946:

1. Manhattan Project Reports on Atom Bombing of Hiroshima and Nagasaki.

2. The Atomic Bombings of Hiroshima and Nagasaki by The Manhattan Engineer District.

3. Photographs of the Atomic Bombings of Hiroshima and Nagasaki by The Manhattan Engineer District.

END

DISTRIBUTION: N, Y.
"2:15 P.M.

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Br. 3425 and 4860

FUTURE RELEASE

PLEASE NOTE DATE

FUTURE RELEASE

FOR RELEASE IN P. M. PAPERS, FRIDAY, JUNE 28, 1946

RADIO-ACTIVE URANIUM ISOTOPES OPEN UP UNEXPLORED PROCESSES OF LIFE

An "x-ray" of the dynamic processes of living now is available to medical research.

Possibility of obtaining for the first time relatively large amounts of radio-active isotopes through the uranium piles of the Manhattan District brings basic biological investigation to a new frontier, according to a statement today by Major General Norman T. Kirk, Surgeon General of the Army, whose office will cooperate in the distribution of the materials to Army Hospitals.

The Surgeon General said requests for these materials should come from accredited research groups or educational institutions and should be directed to Isotopes Branch, Research Division, Manhattan District, P. O. Box "E", Oak Ridge, Tennessee.

Isotopes as tools of medicine have been compared to the microsecpe and the x-ray, General Kirk pointed out. But these were useful largely for study of the organs of life whereas the isotopes open up the largely unexplored field of the processes of life. It is in this respect, rather than as actual remedies for anything, that the substances are of preeminent importance today.

"Medical scientists", said General Kirk, "would like to know more about how calcium and phosphorus are used in building teeth and in uniting fractures, how iodine is used by the thyroid gland, exactly what happens when one or more of the glands of internal secretion starts malfunctioning, how the process of wound healing is carried out".

Such questions and hundreds of others whose answers now are among the secrets of life wait upon radio-active isotopes for clarification, he pointed out. Elements such as calcium, phosphorus, sulphur, iron and a score of others can be "tagged" with small amounts of the isotopes and followed through the body through their emission of beta and gamma radiation. The latter is the same as x-radiation.

Some of these radio-active isotopes may find a place as specific "medicine", medical officers point out. The most notable example to date is radio-active phosphorus, known chemically as P32. Phosphorus is an important constituent of both bones and blood. It is carried in the blood stream through the entire body. When the radio-active isotope is administered the blood stream is subjected to a radium-like bombardment. Consequently when the isotope was produced first in the cyclotron about seven years ago there were high hopes that it might mark a long advance towards the conquest of leukemia — a cancer-like condition of the blood in which there is an enormous increase in white bolld cells which, however, do not have the ability of ordinary cells of this sort to combat infection. Despite various complications and disappointments, use of P32 now is generally accepted as the treatment of choice for certain forms of leukemia. It brings about long remissions of the disease. It cannot be considered a "cure" for any leukemic condition in the present stage of the therapy but it is admittedly a long step in

MORE

advance in the treatment of one of the most difficult maladies known to medical science.

The element iodine tends to concentrate in the thyroid gland. Since radio-active iodine behaves exactly the same as ordinary iodine in the body it was logical that it should be tried in malignant growths of the thyroid. Results to date have been somewhat puzzling and inconclusive. The same is true of other radio-active isotopes which have been tested for specific therapy.

But this whole field of medicine still is almost unexplored and physicians naturally are proceeding with great caution until they know more about specific effects and possible complications. Even if all prospects for the therapeutic use of isotopes fail to materialize, General Kirk stressed, the importance of a relatively abundant supply of these materials remains preeminent.

Any element — 96 now are known — is a combination of infinitestimably minute elementary particles. Those are protons, each carrying one charge of positive electricity; electrons, each carrying one charge of negative electricity; and neutrons, which are not electrically charged.

The nucleus of an atom is made up of protons, electrons and neutrons. Revolving around the nucleus somewhat as planets revolve around the sun, are electrons. There are precisely the same number of electrons revolving around the nucleus as there are protons in the nucleus which are not balanced by nuclear electrons. The number of outer electrons is the atomic number.

But there may be an extra neutron in the nucleus. It weighs precisely as much as a proton. It is electrically neutral. Hence it does not leave room for an extra outer electron. The atomic number remains the same. Element 92, which is uranium, remains uranium so long as there are 92 outer electrons. But with an extra neutron in the nucleus it weighs more. This heavier uranium is known as an isotope. Chemically it acts precisely the same as any other uranium.

For reasons not clearly understood various nuclear combinations are unable to stick together and break up with considerable violence. They then are radio-active, shooting out radiations which can be detected by means of various devices. Chief of these is the so-called Geiger counter. By means of it the presence of radio-active atoms anywhere in the body can be detected. For example, a person is given something containing radio-active copper, by mouth. The counter will enable a physician to follow the course of this copper through the entire process of assimilation by the body.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, Me, N, Sc.
6-26-46

FUTURE RELEASE
PLEASE NOTE DATE

MANHATTAN PROJECT

ROOM 4169

New War Department Building

Tel. - RE 6700
Ext. 76082

F U T U R E   R E L E A S E

FOR RELEASE IN A.M. PAPERS, SUNDAY, JUNE 30, 1946

MANHATTAN PROJECT REPORTS ON ATOM BOMBING OF HIROSHIMA AND NAGASAKI

Official investigation of the results of atom bomb bursts over the Japanese cities of Hiroshima and Nagasaki revealed that no harmful amounts of persistent radioactivity were present after the explosions, according to the report of the Manhattan Project, the War Department's agency for development of the bomb.

The effects of the atomic bombs on human beings were of three main types:

(1) Burns, including "flash" burns caused by the instantaneous heat and light radiation, "remarkable for the great ground area over which they were inflected."

(2) Mechanical injuries, resulting from flying debris, falling buildings, and blast effects.

(3) Radiation injuries, due entirely to gamma rays and neutrons emitted at the instant of explosion and similar to the results of severe X-ray over-exposure.

The preliminary estimates that the general effect of an atomic bomb would be generally equivalent to an explosion of 20,000 tons of TNT were borne out by the detailed studies.

These were among the main conclusions of the report which Major General L. R. Groves, Commanding General of the Manhattan Project, submitted to the Secretary of War. The information was compiled by a Special Manhattan Engineer District Investigating Group made up of a staff of officers, military engineers, and scientists, supplemented by data from the U. S. Strategic Bombing Survey, the British Mission to Japan and the Joint Atomic Bomb Investigating Group (Medical).

The report makes public for the first time the reasons for the selection of the targets, a full description of the nature of an atomic explosion, characteristics of the damage caused by the atomic bomb, and the types of injuries suffered by human beings. It is entirely factual throughout and contains no conjecture as to the ultimate possibilities of the bomb, no predictions for the future and little discussion of possible precautionary or defensive measures.

Evidence that the bombing missions were well carried out is contained in the statements that "In respect to the height of burst, the bombs performed exactly according to design; the bombs were placed in such position that they could not have done more damage from any alternative bursting point in either city; and, the heights of burst were correctly chosen having regard to the type of [illegible]"

1-A

New War Department Building

Tel. - RE 6700
Ext. 76082

FUTURE RELEASE

FOR RELEASE IN A.M. PAPERS, SUNDAY, JUNE 30, 1946

MANHATTAN PROJECT REPORTS ON ATOM BOMBING OF HIROSHIMA AND NAGASAKI

Official investigation of the results of atom bomb bursts over the Japanese cities of Hiroshima and Nagasaki revealed that no harmful amounts of persistent radioactivity were present after the explosions, according to the report of the Manhattan Project, the War Department's agency for development of the bomb.

The effects of the atomic bombs on human beings were of three main types:

(1) Burns, including "flash" burns caused by the instantaneous heat and light radiation, "remarkable for the great ground area over which they were inflected."

(2) Mechanical injuries, resulting from flying debris, falling buildings, and blast effects.

(3) Radiation injuries, due entirely to gamma rays and neutrons emitted at the instant of explosion and similar to the results of severe X-ray over-exposure.

The preliminary estimates that the general effect of an atomic bomb would be generally equivalent to an explosion of 20,000 tons of TNT were borne out by the detailed studies.

These were among the main conclusions of the report which Major General L. R. Groves, Commanding General of the Manhattan Project, submitted to the Secretary of War. The information was compiled by a Special Manhattan Engineer District Investigating Group made up of a staff of officers, military engineers, and scientists, supplemented by data from the U. S. Strategic Bombing Survey, the British Mission to Japan and the Joint Atomic Bomb Investigating Group (Medical).

The report makes public for the first time the reasons for the selection of the targets, a full description of the nature of an atomic explosion, characteristics of the damage caused by the atomic bomb, and the types of injuries suffered by human beings. It is entirely factual throughout and contains no conjecture as to the ultimate possibilities of the bomb, no predictions for the future and little discussion of possible precautionary or defensive measures.

Evidence that the bombing missions were well carried out is contained in the statements that "In respect to the height of burst, the bombs performed exactly according to design; the bombs were placed in such position that they could not have done more damage from any alternative bursting point in either city; and, the heights of burst were correctly chosen having regard to the type of destruction it was desired to cause."

The information collected by the investigators would make possible a reasonably accurate prediction as to the blast damage likely to be caused in any city where an atomic explosion took place, the report states.

1-B

The approximate date for the first use of the bomb was set in the fall of 1942 after the Army had taken over the direction of and the responsibility for the atomic bomb project.

"At that time, under the scientific assumptions, which turned out to be correct, the summer of 1945 was named as the most likely date when sufficient production would have been achieved to make it possible actually to construct and utilize an atomic bomb. It was essential before this time to develop the technique of constructing and detonating the bomb, and to make an almost infinite number of scientific and engineering developments and tests. Between the fall of 1942 and June, 1945, the estimated probabilities of success had risen from about 60 per cent to above 90 per cent; however, not until July 16, 1945, when the first full-scale test took place in New Mexico, was it conclusively proven that the bomb would be successful."

The work of selecting targets for the atomic bombs began in the spring of 1945, according to the report, and was done by bombing experts from the Air Forces, military explosives specialists, mathematicians, theoretical physicists, and intelligence agencies. The problem involved the range of aircraft, weather, desirability of visual bombing, primary and secondary targets, morale effect upon the enemy, and the maximum military effect with a view to shortening the war.

Hiroshima was a communications center, was headquarters of the Second Japanese Army, was used as a troop assembly point, had munitions plants, was a port, and 75 per cent of its population of 255,000 lived in a densely packed area of wooden structures with a few earthquake-proof, reinforced concrete buildings. The frames of the latter withstood the blast, but the buildings were rendered useless and afforded no protection for the occupants.

Nagasaki had most of the target characteristics of Hiroshima but the pattern of damage differed from that at Hiroshima because of hills which deflected the blast and reduced the area of destruction. Hiroshima lies on the broad, flat delta of the Ota River.

In Hiroshima, almost everything up to about one mile from X—ground point directly below burst—was completely destroyed, except for the reinforced concrete buildings, whose interiors were gutted and doors, sashes, frames and all windows were ripped out.

In Nagasaki, 2,000 feet from "X", reinforced concrete buildings with 10-inch walls and 6-inch floors were collapsed; reinforced concrete buildings with 4-inch walls were standing but badly damaged. At 2,000 feet, some 9-inch concrete walls were completely destroyed.

Windows were broken as far as 12 miles from the blast in Nagasaki.

In Hiroshima, more than 60,000 of the estimated 90,000 buildings were destroyed or severely damaged.

While the estimated casualties resulting from both bombings are tabulated in the report, complete details of the causes are not yet available; this phase of the bombing investigation is being prepared by a special medical mission which has not completed its report.

Hiroshima suffered 135,000 casualties, or more than 50 per cent of its population. It was comparable in size to Providence, Rhode Island, or Dallas, Texas. Nearly half, or 66,000, of the casualties were deaths, the greatest number of which occurred immediately after the bombing.

Nagasaki, a city of 195,000, suffered 64,000 casualties, of which 39,000 were deaths.

Burns caused about 60 per cent of the deaths in Hiroshima and 80 per cent in Nagasaki. Falling debris and flying glass caused 30 per cent of the deaths, 1000, the summer of 1945 was named as the most likely date when sufficient production would have been achieved to make it possible actually to construct and utilize an atomic bomb. It was essential before this time to develop the technique of constructing and detonating the bomb, and to make an almost infinite number of scientific and engineering developments and tests. Between the fall of 1942 and June, 1945, the estimated probabilities of success had risen from about 60 per cent to above 90 per cent; however, not until July 16, 1945, when the first full-scale test took place in New Mexico, was it conclusively proven that the bomb would be successful."

The work of selecting targets for the atomic bombs began in the spring of 1945, according to the report, and was done by bombing experts from the Air Forces, military explosives specialists, mathematicians, theoretical physicists, and intelligence agencies. The problem involved the range of aircraft, weather, desirability of visual bombing, primary and secondary targets, morale effect upon the enemy, and the maximum military effect with a view to shortening the war.

Hiroshima was a communications center, was headquarters of the Second Japanese Army, was used as a troop assembly point, had munitions plants, was a port, and 75 per cent of its population of 255,000 lived in a densely packed area of wooden structures with a few earthquake-proof, reinforced concrete buildings. The frames of the latter withstood the blast, but the buildings were rendered useless and afforded no protection for the occupants.

Nagasaki had most of the target characteristics of Hiroshima but the pattern of damage differed from that at Hiroshima because of hills which deflected the blast and reduced the area of destruction. Hiroshima lies on the broad, flat delta of the Ota River.

In Hiroshima, almost everything up to about one mile from X--ground point directly below burst--was completely destroyed, except for the reinforced concrete buildings, whose interiors were gutted and doors, sashes, frames and all windows were ripped out.

In Nagasaki, 2,000 feet from "X", reinforced concrete buildings with 10-inch walls and 6-inch floors were collapsed; reinforced concrete buildings with 4-inch walls were standing but badly damaged. At 2,000 feet, some 9-inch concrete walls were completely destroyed.

Windows were broken as far as 12 miles from the blast in Nagasaki.

In Hiroshima, more than 60,000 of the estimated 90,000 buildings were destroyed or severely damaged.

While the estimated casualties resulting from both bombings are tabulated in the report, complete details of the causes are not yet available; this phase of the bombing investigation is being prepared by a special medical mission which has not completed its report.

Hiroshima suffered 135,000 casualties, or more than 50 per cent of its population. It was comparable in size to Providence, Rhode Island, or Dallas, Texas. Nearly half, or 66,000, of the casualties were deaths, the greatest number of which occurred immediately after the bombing.

Nagasaki, a city of 195,000, suffered 64,000 casualties, of which 39,000 were deaths.

Burns caused about 60 per cent of the deaths in Hiroshima and 80 per cent in Nagasaki. Falling debris and flying glass caused 30 per cent of the deaths in Hiroshima and 14 per cent in Nagasaki.

MORE

2-B

A T T E N T I O N

Errata: On page 19 of the report, the percentage figures in Table D total 118 per cent. They appeared this way in the Japanese reports, but an analysis of the samples on which these estimates are based gives the following:

Nagasaki	Burns	80%
	Falling Debris	8%
	Flying Glass	6%
	Other	6%

Through an oversight, this correction was not made when the report was lithographed.

END

DISTRIBUTION: Aa, Af, B, D (except Do), M, N, T.
6-24-46

FUTURE RELEASE
PLEASE NOTE DATE

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E R E L E A S E

FOR RELEASE UPON DELIVERY

REMARKS BY
THE HONORABLE ROBERT P. PATTERSON, SECRETARY OF WAR,
ON THE RADIO PROGRAM "YOU AND THE ATOM"
COLUMBIA BROADCASTING SYSTEM, 10:15 P.M., EST, MONDAY, JULY 22, 1946

The name for this series of programs, "You and the Atom," is well chosen. The fact is that the atom bears the same relation to the world of material things that the individual does to the world of human beings.

It helps, I believe, if you think of the atom in individual terms, and to look at the problems with which we are now faced as between you and the atom, or between me and the atom, or your son and the atom. Unless we assume the basic individual responsibility in dealing with this newfound knowledge, we cannot fulfill our group, or national, responsibility.

You are bound up with the atom whether you want to be or not. You will control it, or face the consequences. A plan whereby you may control it has been laid before the Atomic Energy Commission of the United Nations by Bernard Baruch, and I urge every American to give his unstinting support to the proposals of Mr. Baruch, which are the proposals of the government of the United States.

Two great decisions have been made in connection with the unleashing of the forces of the atom--the two most difficult and significant decisions throughout all the period of the development of the atomic bomb. The first was when President Roosevelt said, "Make it." The second was when President Truman said, "Drop it."

We are now faced with the third decision--the decision to control it. This is the vital decision. It must be just as clear, just as unmistakable, and as resolutely and fearlessly carried out, as were those first two. But it is not a decision which can be made by one man. It must be the decision of all of the people of the United States and all of the people of the United Nations.

You must decide--and quickly--that you are willing to enter into and live up to an agreement that this universal force will not be available to any man or group of men for the purpose of war, and that its benefits will be the property of all mankind.

Men who follow me on this broadcast series will discuss the research which preceded the bomb, and the research in nuclear physics which will touch all the fields of science in bringing us the benefits of atomic development.

Dr. Charles F. Kettering, one of the greatest research men of the world, once described research as the "business of trying to figure out what you are going to do when you have to stop doing what you are doing now."

This one lesson stands out above all others in a study of atomic energy. Man now has in his hands a force so great--both in its potential for good and its potential for evil--that the time has come for him to do something else. He has to stop doing what he has been doing.

The thing that man must stop doing is resorting to armed conflict to settle his grievances with his fellow man of other tongue, of other political belief, of other culture, or of other station.

FOR RELEASE UPON DELIVERY

REMARKS BY
THE HONORABLE ROBERT P. PATTERSON, SECRETARY OF WAR,
ON THE RADIO PROGRAM "YOU AND THE ATOM"
COLUMBIA BROADCASTING SYSTEM, 10:15 P.M., EST, MONDAY, JULY 22, 1946

The name for this series of programs, "You and the Atom," is well chosen. The fact is that the atom bears the same relation to the world of material things that the individual does to the world of human beings.

It helps, I believe, if you think of the atom in individual terms, and to look at the problems with which we are now faced as between you and the atom, or between me and the atom, or your son and the atom. Unless we assume the basic individual responsibility in dealing with this newfound knowledge, we cannot fulfill our group, or national, responsibility.

You are bound up with the atom whether you want to be or not. You will control it, or face the consequences. A plan whereby you may control it has been laid before the Atomic Energy Commission of the United Nations by Bernard Baruch, and I urge every American to give his unstinting support to the proposals of Mr. Baruch, which are the proposals of the government of the United States.

Two great decisions have been made in connection with the unleashing of the forces of the atom--the two most difficult and significant decisions throughout all the period of the development of the atomic bomb. The first was when President Roosevelt said, "Make it." The second was when President Truman said, "Drop it."

We are now faced with the third decision--the decision to control it. This is the vital decision. It must be just as clear, just as unmistakable, and as resolutely and fearlessly carried out, as were those first two. But it is not a decision which can be made by one man. It must be the decision of all of the people of the United States and all of the people of the United Nations.

You must decide--and quickly--that you are willing to enter into and live up to an agreement that this universal force will not be available to any man or group of men for the purpose of war, and that its benefits will be the property of all mankind.

Men who follow me on this broadcast series will discuss the research which preceded the bomb, and the research in nuclear physics which will touch all the fields of science in bringing us the benefits of atomic development.

Dr. Charles F. Kettering, one of the greatest research men of the world, once described research as the "business of trying to figure out what you are going to do when you have to stop doing what you are doing now."

This one lesson stands out above all others in a study of atomic energy. Man now has in his hands a force so great--both in its potential for good and its potential for evil--that the time has come for him to do something else. He has to stop doing what he has been doing.

The thing that man must stop doing is resorting to armed conflict to settle his grievances with his fellow man of other tongue, of other political belief, of other culture, or of other station.

The reason he must stop doing it is that he now has available for war a means of destruction great enough to destroy himself as well as his enemy, great enough to destroy the entire civilization which has produced such knowledge and power.

MORE

1-B

Do not be fooled by any talk that the atomic bomb is not as powerful as we first believed after the breath-taking announcement of Hiroshima. Don't let yourself be lulled into any false sense of security by such words as, "Oh well, its just another bomb; they'll find a defense against atom bombs!" Defenses are being studied, yes, but regardless of how potent, they can offer only partial protection, not security.

Don't discount Bikini because ships continued to float. Don't dismiss the reported devastation of Hiroshima and Nagasaki on grounds that Japanese buildings are flimsy anyway. Remember that America's great centers of population, our concentrations of industry, and our ports are vulnerable too. One atomic bomb would have done far more damage at Pearl Harbor than did the massive two-hour raid which plunged us into war.

Remember, one bomb, carried by one airplane, killed 66,000 people at Hiroshima, injured 69,000, and destroyed or damaged more than two thirds of all the buildings in a city of a quarter of a million.

I tell you that the atomic bomb is as destructive as any story written about it. Just keep in mind that only four such bombs have been exploded in history--the fifth will be exploded within a few days.

But despite the bomb's importance as a weapon, it is tragically ironic that so great a step in man's knowledge should have been taken under the impetus of war.

The Army, working through the Manhattan Project, working with the complete support of the government and people of the United States, working closely with the men of science, who initially had only the barest of theories on which to proceed, and who developed those theories with brilliant success, working also with the engineers who could apply these techniques--your Army--built and operated the facilities in which the atomic bomb was produced.

General Leslie R. Groves, who commanded the Manhattan Project, is an able Engineer Officer who assembled and operated a tremendous and efficient organization for the greatest development construction and operation program ever undertaken by any nation. The American people, I know, are proud of the work which the Army Engineers did.

This job, however, was a wartime assignment for the Army. Secretary Stimson, whose great vision and strength were so invaluable throughout this program, and I both became convinced a year ago that it would be desirable to place this in the hands of another agency of the government, specially created for the work, as quickly as possible after the war.

For nearly a year, the Army has served as a trustee, responsible to the American people, for the nation's most important single enterprise. And it is an enterprise as vital to our security as it is promising to our welfare--and the welfare of the people of the world. The Army is responsible for security but not for the peacetime development of the nation. To think otherwise is not in accord with the American tradition. I have made my views clear on this subject. I have consistently urged the passage of legislation which would relieve the Army of this broad responsibility.

The Army's sole concern is that it be enabled to work with the assistance and cooperation of the American people, in order to maintain itself in a state of preparedness sufficient to fulfill its obligations to the people. I have endorsed the McMahon Bill as adequate for this purpose.

The potential benefits of atomic development are unknown. They may be even greater than the potential for destruction. No one knows--no one can predict with any assurance. Perhaps the first great application will be in the field of biological research. The first shipment of radioactive isotopes from Oak Ridge, Tennessee, will be made this week. They will be used in medical, biological and industrial research.

In the new Argonne National Laboratory at Chicago--being established by the Manhattan District, biologists are carrying out experiments which may lead to one reported devastation of Hiroshima and Nagasaki on grounds that Japanese buildings are flimsy anyway. Remember that America's great centers of population, our concentrations of industry, and our ports are vulnerable too. One atomic bomb would have done far more damage at Pearl Harbor than did the massive two-hour raid which plunged us into war.

Remember, one bomb, carried by one airplane, killed 66,000 people at Hiroshima, injured 69,000, and destroyed or damaged more than two thirds of all the buildings in a city of a quarter of a million.

I tell you that the atomic bomb is as destructive as any story written about it. Just keep in mind that only four such bombs have been exploded in history--the fifth will be exploded within a few days.

But despite the bomb's importance as a weapon, it is tragically ironic that so great a step in man's knowledge should have been taken under the impetus of war.

The Army, working through the Manhattan Project, working with the complete support of the government and people of the United States, working closely with the men of science, who initially had only the barest of theories on which to proceed, and who developed those theories with brilliant success, working also with the engineers who could apply these techniques--your Army--built and operated the facilities in which the atomic bomb was produced.

General Leslie R. Groves, who commanded the Manhattan Project, is an able Engineer Officer who assembled and operated a tremendous and efficient organization for the greatest development construction and operation program ever undertaken by any nation. The American people, I know, are proud of the work which the Army Engineers did.

This job, however, was a wartime assignment for the Army. Secretary Stimson, whose great vision and strength were so invaluable throughout this program, and I both became convinced a year ago that it would be desirable to place this in the hands of another agency of the government, specially created for the work, as quickly as possible after the war.

For nearly a year, the Army has served as a trustee, responsible to the American people, for the nation's most important single enterprise. And it is an enterprise as vital to our security as it is promising to our welfare--and the welfare of the people of the world. The Army is responsible for security but not for the peacetime development of the nation. To think otherwise is not in accord with the American tradition. I have made my views clear on this subject. I have consistently urged the passage of legislation which would relieve the Army of this broad responsibility.

The Army's sole concern is that it be enabled to work with the assistance and cooperation of the American people, in order to maintain itself in a state of preparedness sufficient to fulfill its obligations to the people. I have endorsed the McMahon Bill as adequate for this purpose.

The potential benefits of atomic development are unknown. They may be even greater than the potential for destruction. No one knows--no one can predict with any assurance. Perhaps the first great application will be in the field of biological research. The first shipment of radioactive isotopes from Oak Ridge, Tennessee, will be made this week. They will be used in medical, biological and industrial research.

In the new Argonne National Laboratory at Chicago--being established by the Manhattan District, biologists are carrying out experiments which may lead to one of the century's most important medical developments. This is a study of how the white cells of the blood perform their function of attacking and destroying the invading bacteria of infection.

MORE

2-B

At both Hanford and Oak Ridge, experiments are planned in the generation of electric power from the energy released by the reaction of an atomic pile. Some of the same engineers who worked on the development of the bomb believe that in ten or twenty years it may be possible to deliver electric power to the bus bars of a generating station at a reasonable cost and one comparing favorably with good practice in the electric utility industry.

In order to stimulate nuclear research and to spread the knowledge and techniques of nuclear physics, the Army plans the establishment of three national laboratories to be operated in conjunction with the major universities and research institutions of the country. One such laboratory in the East, one at Chicago, and one in the West will provide the facilities--never before available--in which the nation's scientists can carry on their work.

While the Army has directed the operations of the atomic energy program for nearly a year without the guidance of any established national policy, it has endeavored to conduct the program in such a way as to realize the maximum peacetime benefits, at the same time without in any way compromising the security of the United States. The new laboratories are planned as a part of this program.

But no one agency can build the political and administrative structure which must restrain the evil of the atomic bomb and shelter the good in atomic energy.

Unless we can build such a structure to control the atom, the atom will control us. It is up to the people of the United States, to the other peace-loving people of the world, to the leaders and the people of the United Nations--truly united. It is up to the people of the United States, to you, and to me. If I might paraphrase the title of this program, "It is you or the atom."

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, N, Speeches.
7-19-46

WAR DEPARTMENT
Public Relations Division
PRESS SECTION, AAF
Tel. RE 6700
Ext. 74783 and 74344

July 22, 1946

I M M E D I A T E   R E L E A S E

AAF SEEKING ATOMIC PROPULSION FOR AIRCRAFT

The Army Air Forces is monitoring a cooperative effort with the Manhattan Engineering District and the U. S. aircraft engine industry to solve the problem of using atomic energy for the propulsion of aircraft.

The Fairchild Engine and Airplane Corporation of New York, New York, has been awarded the primary contract for administering the project, and is working in closest collaboration with many other aircraft engine companies, the Manhattan Engineering District, and the AAF in seeking a workable method of applying atomic power to AAF needs.

"This is only one of many problems being studied in following the AAF policy of leaving no stone unturned in seeking basic scientific knowledge to produce the best weapons possible for the defense of this country," explained Major General Curtis E. LeMay, Deputy Chief of Air Staff for Research and Development, who is directing the project.

By means of a cooperative effort by several firms, it is hoped to spread the general knowledge gained in the enterprise throughout the aircraft engine industry.

Security requirements will not permit disclosure of details of the plan, but no final solution has been found and no estimated date can be predicted for completion of the project, General LeMay added.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dg, Dm, E, Ea, N,
5:00 PM

FUTURE RELEASE
PLEASE NOTE DATE

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E   R E L E A S E

FOR RELEASE 1:00 P.M., EST, FRIDAY, AUGUST 2, 1946

ANNOUNCEMENT OF FIRST SHIPMENT OF
RADIOISOTOPES FROM MANHATTAN PROJECT,
CLINTON LABORATORIES, OAK RIDGE, TENNESSEE

Oak Ridge, Tennessee, August 2 — New Horizons of Medical and biological research were opened today when the Manhattan Engineer District, key organization in the development of the atomic bomb, delivered the first radioactive isotopes to the nation's research institutions.

First peacetime products of the government's hugh atomic energy facilities were pea-sized units of Carbon-14, which for the next 10,000 to 25,000 years will emit 37 million beta particles per second, and will be used in research in connection with cancer, diabetes, photosynthesis, carbon deposition in the teeth and bones and in the utilization of fats by the human body.

Barnard Free Skin and Cancer Hospital of St. Louis received the first unit for study of the processes by which cancer is produced. The hospital's application was the first cleared through the necessarily elaborate distribution procedure.

Created in the chain- reacting uranium pile of Clinton Laboratories, the atomic research center here operated for the government by Monsanto Chemical Company, the unit of Carbon 14 obtained by the hospital weighed only about one ten-thousandth of an ounce. Its half-life is estimated at 10,000 to 25,000 years; in other words, starting with the year 11,946 A.D. the unit (if kept intact) should still be giving out beta particles at an average rate of 18½ million particles per second. During the elapsed time 10 billion particles will have been emitted.

Yet despite its small physical size, the unit of Carbon 14 for Barnard Hospital represents from 100 to 1000 times as much of the isotopes as heretofore made available to research in any single cyclotron-produced order. The unit was priced at $367, the actual estimated cost of production, plus handling and shipping charges, with the total cost to the hospital about $400.

Dr. E. V. Cowdry and Dr. William L. Simpson, research director and associate research director of the hospital, respectively, received the millicuie of Carbon 14 (one millicurie is that amount of radioactive material which emits 37 million disintegration particles per second. Those present included Colonel E. E. Kirkpatrick, Deputy District Engineer in charge of the Oak Ridge Project; Prescott Sandidge, Deputy Administrative Director, Clinton Laboratories; Dr. E. P. Wigner, research director of Clinton Laboratories, and the key technical personnel of the laboratories.

Others to receive similarly-sized units of Carbon 14 are:

Dr. D. Wright Wilson, University of Pennsylvania School of Medicine. He plans to study a comparison of sugar and lactic acid metabolism in normal and diabetic animals. Following the source of sugar containing radioactive atoms, he hopes to be able to unravel some of the problems of diabetes.

Dr. James Franck, 1925 Nobel Prize Winner, professor of physical chemistry at the University of Chicago, and world authority on photosynthesis. He will use

PRESS SECTION
Tel. - RE 6700
Brs. 3425 and 4860

FUTURE RELEASE

FOR RELEASE 1:00 P.M., EST, FRIDAY, AUGUST 2, 1946

ANNOUNCEMENT OF FIRST SHIPMENT OF RADIOISOTOPES FROM MANHATTAN PROJECT, CLINTON LABORATORIES, OAK RIDGE, TENNESSEE

Oak Ridge, Tennessee, August 2 — New Horizons of Medical and biological research were opened today when the Manhattan Engineer District, key organization in the development of the atomic bomb, delivered the first radioactive isotopes to the nation's research institutions.

First peacetime products of the government's hugh atomic energy facilities were pea-sized units of Carbon-14, which for the next 10,000 to 25,000 years will emit 37 million beta particles per second, and will be used in research in connection with cancer, diabetes, photosynthesis, carbon deposition in the teeth and bones and in the utilization of fats by the human body.

Barnard Free Skin and Cancer Hospital of St. Louis received the first unit for study of the processes by which cancer is produced. The hospital's application was the first cleared through the necessarily elaborate distribution procedure.

Created in the chain- reacting uranium pile of Clinton Laboratories, the atomic research center here operated for the government by Monsanto Chemical Company, the unit of Carbon 14 obtained by the hospital weighed only about one ten-thousandth of an ounce. Its half-life is estimated at 10,000 to 25,000 years; in other words, starting with the year 11,946 A.D. the unit (if kept intact) should still be giving out beta particles at an average rate of $18\frac{1}{2}$ million particles per second. During the elapsed time 10 billion particles will have been emitted.

Yet despite its small physical size, the unit of Carbon 14 for Barnard Hospital represents from 100 to 1000 times as much of the isotopes as heretofore made available to research in any single cyclotron-produced order. The unit was priced at $367, the actual estimated cost of production, plus handling and shipping charges, with the total cost to the hospital about $400.

Dr. E. V. Cowdry and Dr. William L. Simpson, research director and associate research director of the hospital, respectively, received the millicuie of Carbon 14 (one millicurie is that amount of radioactive material which emits 37 million disintegration particles per second. Those present included Colonel E. E. Kirkpatrick, Deputy District Engineer in charge of the Oak Ridge Project; Prescott Sandidge, Deputy Administrative Director, Clinton Laboratories; Dr. E. P. Wigner, research director of Clinton Laboratories, and the key technical personnel of the laboratories.

Others to receive similarly-sized units of Carbon 14 are:

Dr. D. Wright Wilson, University of Pennsylvania School of Medicine. He plans to study a comparison of sugar and lactic acid metabolism in normal and diabetic animals. Following the source of sugar containing radioactive atoms, he hopes to be able to unravel some of the problems of diabetes.

Dr. James Franck, 1925 Nobel Prize Winner, professor of physical chemistry at the University of Chicago, and world authority on photosynthesis. He will use Carbon 14 to study the mechanisms by which plants take energy from sunlight and store it as chemical energy. Photosynthesis is responsible for most of the stored energy used by men, such as coal, oil, wood and food.

MORE

1-B

Dr. W. D. Armstrong, professor of physiological chemistry, University of Minnesota, whose investigations into the role of flourine in the enamel of teeth are widely recognized. He plans to use tagged carbon atoms to trace the deposition of carbon compounds in the dentin (inner pulp) and enamel of teeth and in bone.

Dr. I. L. Chaikoff, professor of physiology, University of California School of Medicine. He will label fats with Carbon 14 and study their utilization by the liver, muscle, blood, etc.

Colonel Kirkpatrick announced that hundreds of applicants for radioactive isotopes, including not only Carbon 14 but also many other of the 50-odd varieties producible at the Clinton Pile, have been received from the nation's leading research laboratories. He indicated that from 30 to 40 orders will be filled within the immediate future, and said several hundred additional orders are likely to be filled within the next few months.

Requests for radioelements thus far received, he said, suggest widely divergent fields of scientific interest. These include the study of:

1. Mechanisms by which cancer is produced.
2. Mechanisms by which plants utilize sunlight and carbon dioxide.
3. Disfunction of the thyroid glands.
4. Growth and composition of teeth and bones.
5. Utilization of sugar in diabetes.
6. Utilization of all essential food components.
7. The turnover of iron in anemic conditions.
8. Absorption by plants of essential elements from soil.
9. Vulcanization and polymerization of rubber.
10. Problems associated with radioactive isotopes themselves.

Dr. Paul C. Aebersold, formerly of the University of California Radiation Laboratory, and now chief of the District's Isotopes Branch, explained that plans of the various laboratories contemplate the use of isotopes in two important ways; First, as tracer atoms or "tracers" for following the course of atoms in chemical, biological and technical processes, and secondly, as possible therapeutic agents for treatment of certain special diseases.

The value of radioisotopes, however, is considered to reside more in the study of the causes of disease than in treatment. It was emphasized that radioisotope technology is at present directed mainly at fundamental investigations.

The projected use of Carbon 14 by the Barnard Free Skin and Cancer Hospital, he pointed out, offers not only an effective illustration of the material's research potential, but also of the cooperative procedures which such studies will involve.

The St. Louis institution will endeavor to "tag" component parts of cancer-producing molecules and then, through radiation measuring instruments, seek an answer to this question: "Why does this particular molecule produce cancer?" Three cooperating organizations are to participate in the investigation.

The first step will be to turn the unit of Carbon 14 over to Dr. Martin D. Kamen, co-discoverer with Sam Ruben of Carbon 14 at the University of California in 1941, now associated with the Mallinckrodt Institute of Radiology of the Washington Univeristy School of Medicine, St. Louis.

Dr. Kamen will convert the Carbon 14 from its present form in carbonate to carbon dioxide gas, and thence to acetic acid, the principal component of vinegar. The acetic acid is to be shipped to Dr. Paul Rothemund of the C. F. Kettering Foundation for the Study of Chlorophyll and Photogynthesis at Antioch College, Yellow Springs, Ohio, who will use it to prepare a cancer-producing agent (20-methylcholanthrene).

A part of the cancer-producing agent will be retained at Yellow Springs to study the chemistry of cancer producing agents, while the remainder will be used by Dr. Simpson at Barnard Hospital to study the artificial production of skin cancer with [illegible] of Medicine. He will label fats with Carbon 14 and study their utilization by the liver, muscle, blood, etc.

Colonel Kirkpatrick announced that hundreds of applicants for radioactive isotopes, including not only Carbon 14 but also many other of the 50-odd varieties producible at the Clinton Pile, have been received from the nation's leading research laboratories. He indicated that from 30 to 40 orders will be filled within the immediate future, and said several hundred additional orders are likely to be filled within the next few months.

Requests for radioelements thus far received, he said, suggest widely divergent fields of scientific interest. These include the study of:

1. Mechanisms by which cancer is produced.
2. Mechanisms by which plants utilize sunlight and carbon dioxide.
3. Disfunction of the thyroid glands.
4. Growth and composition of teeth and bones.
5. Utilization of sugar in diabetes.
6. Utilization of all essential food components.
7. The turnover of iron in anemic conditions.
8. Absorption by plants of essential elements from soil.
9. Vulcanization and polymerization of rubber.
10. Problems associated with radioactive isotopes themselves.

Dr. Paul C. Aebersold, formerly of the University of California Radiation Laboratory, and now chief of the District's Isotopes Branch, explained that plans of the various laboratories contemplate the use of isotopes in two important ways; First, as tracer atoms or "tracers" for following the course of atoms in chemical, biological and technical processes, and secondly, as possible therapeutic agents for treatment of certain special diseases.

The value of radioisotopes, however, is considered to reside more in the study of the causes of disease than in treatment. It was emphasized that radioisotope technology is at present directed mainly at fundamental investigations.

The projected use of Carbon 14 by the Barnard Free Skin and Cancer Hospital, he pointed out, offers not only an effective illustration of the material's research potential, but also of the cooperative procedures which such studies will involve.

The St. Louis institution will endeavor to "tag" component parts of cancer-producing molecules and then, through radiation measuring instruments, seek an answer to this question: "Why does this particular molecule produce cancer?" Three cooperating organizations are to participate in the investigation.

The first step will be to turn the unit of Carbon 14 over to Dr. Martin D. Kamen, co-discoverer with Sam Ruben of Carbon 14 at the University of California in 1941, now associated with the Mallinckrodt Institute of Radiology of the Washington Univeristy School of Medicine, St. Louis.

Dr. Kamen will convert the Carbon 14 from its present form in carbonate to carbon dioxide gas, and thence to acetic acid, the principal component of vinegar. The acetic acid is to be shipped to Dr. Paul Rothemund of the C. F. Kettering Foundation for the Study of Chlorophyll and Photogynthesis at Antioch College, Yellow Springs, Ohio, who will use it to prepare a cancer-producing agent (20-methylcholanthrene).

A part of the cancer-producing agent will be retained at Yellow Springs to study the chemistry of cancer producing agents, while the remainder will be used by Dr. Simpson at Barnard Hospital to study the artificial production of skin cancer with mice being used as laboratory subjects. Dr. Simpson may learn, by following the course of the tagged atoms, just how cancer producing parts break off, how and where they enter the animal, and which fractions of the cancer-producing molecule enter certain parts of the animal tissue.

MORE

2-B

A number of other kinds of radioisotopes also have been requested. Among the applicants are:

Dr. Paul Hahn, Professor of Biochemistry, Vanderbilt University, Nashville, Tennessee. Dr. Hahn has requested 100 millicuries (or one unit) of radioactive gold, which he will make into a colloid (suspension of fine particles) that will be injected into the bloodstream of an animal to study the takeup of the radioactive gold by blood cells. This is a preliminary step of an investigation into possible uses of radioactive gold in certain blood diseases, such as leukemia. He also intends to use radioactive iron in similar investigations.

Dr. John E. Christian, Professor of Pharmaceutical Chemistry, Purdue University School of Pharmacy. He has requested Phosphorus 32, or radiophosphorus, for use in development of a new technique to test the effect of various medicinal substances on absorption of phosphate from the small intestine. The same radioisotope will be used by Dr. Christian to study phosphorus depletion of teeth.

The American Smelting and Refining Company, Department of Agricultural Research, Salt Lake City. This company seeks a quantity of Sulphur 35 to aid in a fundamental study in the metabolism of plants.

The Montefiore Hospital and the Memorial Hospital, New York City, which seek radioiodine for use in clinical investigations in treatment of certain types of hyperthyriodism and certain types of cancer of the thyroid.

Professor James Cork, Physics Department, University of Michigan. He has requested radioactive antimony, arsenic and caesium, for use in fundamental nuclear physics studies.

The radioisotopes are being made available by the Manhattan Engineer District under a program announced June 14. This announcement followed many months of detailed study by the responsible heads of the Manhattan Project assisted by the scientists of Clinton Laboratories, the University of Chicago, the University of California and the University of Iowa.

It is contemplated that the radioisotopes, which are radioactive forms of common elements with the same chemical properties of the stable element but having a different atomic weight, will be prepared largely at the Clinton Laboratories operated for the Manhattan District by the Monsanto Chemical Company. The bombardment facilities of the Hanford Engineer Works at Pasco, Washington, now operated by the du Pont Company for the Government but which is to be taken over September 1 by General Electric Company, will also be used insofar as the flexibility of that operation allows. Additionally, the Argonne National Laboratory at Chicago, recently announced as the peacetime successor of the Metallurgical Laboratory, and still to be operated by the University of Chicago, cooperating with a group of midwestern universities, is aiding materially in pertinent preparations and research.

Each atomic element may occur in "sister" forms, called isotopes. An isotope differs from its sisters in the structure of the atomic "heart" or nucleus. The satellite electrons around the nucleus are arrayed the same for each element, hence the "sisters" meet the outside world and behave chemically alike. In addition to the stable sisters of elements which may occur in nature, it is possible by man-made devices, such as a pile or other atomic nucleus bombarding devices, to make isotopes which do not occur in nature and which are radioactive.

Radioactive sisters behave chemically the same as their normal stable sisters. Because of their radioactivity however, they can be followed in the processes in which they participate. Various terms have been used to indicate this property by which radioactive sisters can be followed, such as "tracer", "labeled", or "tagged" elements. By this it is meant they can be tagged much as wild fowl are banded to follow their migration. The tracer application is often also explained by an analogy with the use of tracer bullets. A tracer bullet follows the same path and arrives at the same target as a normal bullet but can be seen by the visible radiation which it emits. In the case of a tracer element or tracer be injected into the bloodstream of an animal to study the uptake of the radio-active gold by blood cells. This is a preliminary step of an investigation into possible uses of radioactive gold in certain blood diseases, such as leukemia. He also intends to use radioactive iron in similar investigations.

Dr. John E. Christian, Professor of Pharmaceutical Chemistry, Purdue University School of Pharmacy. He has requested Phosphorus 32, or radiophosphorus, for use in development of a new technique to test the effect of various medicinal substances on absorption of phosphate from the small intestine. The same radioisotope will be used by Dr. Christian to study phosphorus depletion of teeth.

The American Smelting and Refining Company, Department of Agricultural Research, Salt Lake City. This company seeks a quantity of Sulphur 35 to aid in a fundamental study in the metabolism of plants.

The Montefiore Hospital and the Memorial Hospital, New York City, which seek radioiodine for use in clinical investigations in treatment of certain types of hyperthyriodism and certain types of cancer of the thyroid.

Professor James Cork, Physics Department, University of Michigan. He has requested radioactive antimony, arsenic and caesium, for use in fundamental nuclear physics studies.

The radioisotopes are being made available by the Manhattan Engineer District under a program announced June 14. This announcement followed many months of detailed study by the responsible heads of the Manhattan Project assisted by the scientists of Clinton Laboratories, the University of Chicago, the University of California and the University of Iowa.

It is contemplated that the radioisotopes, which are radioactive forms of common elements with the same chemical properties of the stable element but having a different atomic weight, will be prepared largely at the Clinton Laboratories operated for the Manhattan District by the Monsanto Chemical Company. The bombardment facilities of the Hanford Engineer Works at Pasco, Washington, now operated by the du Pont Company for the Government but which is to be taken over September 1 by General Electric Company, will also be used insofar as the flexibility of that operation allows. Additionally, the Argonne National Laboratory at Chicago, recently announced as the peacetime successor of the Metallurgical Laboratory, and still to be operated by the University of Chicago, cooperating with a group of midwestern universities, is aiding materially in pertinent preparations and research.

Each atomic element may occur in "sister" forms, called isotopes. An isotope differs from its sisters in the structure of the atomic "heart" or nucleus. The satellite electrons around the nucleus are arrayed the same for each element, hence the "sisters" meet the outside world and behave chemically alike. In addition to the stable sisters of elements which may occur in nature, it is possible by man-made devices, such as a pile or other atomic nucleus bombarding devices, to make isotopes which do not occur in nature and which are radioactive.

Radioactive sisters behave chemically the same as their normal stable sisters. Because of their radioactivity however, they can be followed in the processes in which they participate. Various terms have been used to indicate this property by which radioactive sisters can be followed, such as "tracer", "labeled", or "tagged" elements. By this it is meant they can be tagged much as wild fowl are banded to follow their migration. The tracer application is often also explained by an analogy with the use of tracer bullets. A tracer bullet follows the same path and arrives at the same target as a normal bullet but can be seen by the visible radiation which it emits. In the case of a tracer element or tracer isotope, it is "seen" by instruments, such as Geiger counters or electroscopes, which receive and register the radiations emitted by the radioactive atomic "hearts".

Another imaginative analogy refers to the radioisotopes betraying the presence of their sister stable isotopes by "broadcasting" their position by means of radioactivity. In still a further analogy the labeled isotopes are imagined as carrying small lanterns by which they signal their presence; the "light" (penetrating radiation) coming from the atomic lanterns being detected by very sensitive radiation instruments.

Very small organisms or very small virus particles can be followed by high-powered microscopes or by electron microscopes. The tracer element technique permits an even more minute and detailed investigation of chemical and biological processes. In this case, atoms and molecules themselves may be traced; and furthermore their identity and changes in identity may be followed. This amounts to an "atomic microscope."

It is obvious that the ability to follow the course of atoms and molecules will permit investigations that have heretofore defied attack by other methods. By this means the role of carbon, phosphorus, sodium, sulphur, and other widely occurring elements may be followed in important metabolic and organic processes in plants, animals and human beings. Moreover, almost any element can be traced through the complicated maze of reactions and processes which occur in chemistry, metallurgy and industrial processes in general.

In a few cases the tracer bullet isotopes are not only useful as tracer or "atomic spies" but as active "atomic Artillery"; in which case the radioactive isotope can be used to irradiate the locations where they deposit. Some influence has been thus achieved in controlling certain forms of leukemia, and polycythemia vera, both very special types of blood disorders. The use of radioactive materials in therapeutic connections is still very much in the investigational stage. Only a limited number of well qualified and experienced institutions undertake such investigations. In no instance has there been any claim for a cure for any blood disfunction by the use of radioisotopes. The greatest benefits from the use of these materials will most likely come, not from therapeutic uses, but by using the tracer technique in investigating the causes of disease and the life process in general.

END

DISTRIBUTION: Aa, Af, B, D (except Dc), Me, N, Re, Sc.
7-31-46

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 3425 and 4860

AUG 2

BACKGROUND MATERIAL

PRODUCTION OF RADIOACTIVE ISOTOPES IN THE PILE

A radioactive isotope, commonly referred to as a "radioisotope," in the uranium chain-reacting pile, is made by placing in the pile a stable element, which may be in the form of a metal or a salt or even a liquid or a gas, and simply leaving it there for a given length of time. This is the basic process and it applies regardless of whether the material inserted is a fissionable material, such as uranium, a common salt such as sodium chloride, or an ordinary metal such as iron. The method is known as the pile irradiation of the material.

As we examine the considerations which must be met, however, the irradiation process becomes more complicated. The material put into the pile must be protected from the temperatures which it will meet (hence liquids and gases are not usually used), and from the action of air and water vapor in the air, etc. It must be enclosed in a container not only for the above reasons but so that it may be easily handled. This requirement means that a standard size and shape of container is desirable. The form and purity of the material exposed, as well as the material of which the exposure can is made, must be such as to minimize neutron loss—that is, the drain on the power of the pile must be kept to a minimum. These conditions are usually met by carefully selecting the form of the element to be exposed and using aluminum for the can in which it is enclosed.

The second major consideration is the subsequent separation of the newly created radioactive species from its "parent," the latter being the element or compound put into the pile. Such separation may be exceedingly complicated, as in the case of the extraction of the individual fission products from the parent uranium; it may be relatively straightforward and simple, as in the extraction of radioactive iodine from the parent tellurium; or it may be skipped altogether, as in the case of radioactive phosphorus, produced by the exposure of phosphorus itself. In the last named case, the radioactive phosphorus cannot be separated from the stable phosphorus parent (here the stable phosphorus is called a "carrier" for the tiny amount of radio-phosphorus). Therefore, the material can be shipped and used as soon as it is taken out of the pile.

The Canning Operation:

Two types of aluminum cans are used to enclose material for isotope production in the pile. One is a welded tight-fitting aluminum jacket. This is used both for the uranium (which keeps the pile going and in which fission products are created) and for the calcium nitrate salt, which is, at present, being irradiated for the creation of the widely discussed carbon 14 isotope. The reason for the use of the uranium-type jacket for the nitrate salt is because it has been found advantageous to load this into the pile in the same manner as the uranium itself is loaded. The parent materials for all the other radioisotopes which are produced in the Clinton Laboratories pile—over 50 in number—are placed in a small aluminum can about the size and shape of a man's index finger. The amounts of material which are put into these small exposure cans vary from a few milligrams (a milligram is 1/500,000th of a pound) to an ounce or two. The amount used depends upon the relative affinity (known as "cross-section") of the exposed material for neutrons and upon the amount of the radioisotope one wishes to make.

Loading, Irradiation and Unloading:

These small cans are then set into holes in a graphite block, running into the center of the pile. When the graphite block containing a number of such cans is loaded, it is pushed into the pile and left there during the period of irradiation.

PRODUCTION OF RADIOACTIVE ISOTOPES IN THE PILE

A radioactive isotope, commonly referred to as a "radioisotope," in the uranium chain-reacting pile, is made by placing in the pile a stable element, which may be in the form of a metal or a salt or even a liquid or a gas, and simply leaving it there for a given length of time. This is the basic process and it applies regardless of whether the material inserted is a fissionable material, such as uranium, a common salt such as sodium chloride, or an ordinary metal such as iron. The method is known as the pile irradiation of the material.

As we examine the considerations which must be met, however, the irradiation process becomes more complicated. The material put into the pile must be protected from the temperatures which it will meet (hence liquids and gases are not usually used), and from the action of air and water vapor in the air, etc. It must be enclosed in a container not only for the above reasons but so that it may be easily handled. This requirement means that a standard size and shape of container is desirable. The form and purity of the material exposed, as well as the material of which the exposure can is made, must be such as to minimize neutron loss—that is, the drain on the power of the pile must be kept to a minimum. These conditions are usually met by carefully selecting the form of the element to be exposed and using aluminum for the can in which it is enclosed.

The second major consideration is the subsequent separation of the newly created radioactive species from its "parent," the latter being the element or compound put into the pile. Such separation may be exceedingly complicated, as in the case of the extraction of the individual fission products from the parent uranium; it may be relatively straightforward and simple, as in the extraction of radioactive iodine from the parent tellurium; or it may be skipped altogether, as in the case of radioactive phosphorus, produced by the exposure of phosphorus itself. In the last named case, the radioactive phosphorus cannot be separated from the stable phosphorus parent (here the stable phosphorus is called a "carrier" for the tiny amount of radio-phosphorus). Therefore, the material can be shipped and used as soon as it is taken out of the pile.

The Canning Operation:

Two types of aluminum cans are used to enclose material for isotope production in the pile. One is a welded tight-fitting aluminum jacket. This is used both for the uranium (which keeps the pile going and in which fission products are created) and for the calcium nitrate salt, which is, at present, being irradiated for the creation of the widely discussed carbon 14 isotope. The reason for the use of the uranium-type jacket for the nitrate salt is because it has been found advantageous to load this into the pile in the same manner as the uranium itself is loaded. The parent materials for all the other radioisotopes which are produced in the Clinton Laboratories pile—over 50 in number—are placed in a small aluminum can about the size and shape of a man's index finger. The amounts of material which are put into these small exposure cans vary from a few milligrams (a milligram is 1/500,000th of a pound) to an ounce or two. The amount used depends upon the relative affinity (known as "cross-section") of the exposed material for neutrons and upon the amount of the radioisotope one wishes to make.

Loading, Irradiation and Unloading:

These small cans are then set into holes in a graphite block, running into the center of the pile. When the graphite block containing a number of such cans is loaded, it is pushed into the pile and left there during the period of irradiation.

While the pile is being loaded or unloaded it is not running—that is to say, the control rods which stop the chain reaction are in place. This is to prevent a dangerous beam of neutrons from emerging through the hole which is being loaded. Even with the pile shut down, personnel must stand clear of the hole in order to avoid the residual gamma rays emerging from it.

MORE

After th loading has been accomplished and the open hole h been blocked so that neutrons cannot escape, the pile is started up. Usually the material is left in the pile for a matter of one to several weeks. The time of exposure depends upon the "half-life" of the desired radioisotope (the shorter the half-life, the shorter the practical exposure time), as well as upon the amount desired and the cross-section of the exposed material.

When it is time to remove the batch of samples, the pile is shut down and left long enough to permit the gamma radiation, which will come from the open hole, to die off to a relatively low value. Then the hole is opened and the graphite block is pulled out into a lead "coffin." This precaution is necessary because of the radiations being emitted by the exposed material and by the exposure can itself. Technicians stand by with radiation-measuring instruments to insure that no person exposes himself to a hazardous amount of radiation. The samples are removed one by one from the block by means of long tongs, examined with the instruments and then placed in a lead "safe" for temporary storage. Even those samples which emit very little radiation are not picked up with the bare hand. Gloves are always used because of the danger of picking up small amounts of radioactive material from the surface of anything which has once been inside the pile.

Chemical Processing: Separation of Radioisotope from Parent and Impurities:

Many of the cans thus removed from the pile are ready for shipment as they stand, requiring only to be placed in a container with lead walls of sufficient thickness to stop harmful radiation. Radioisotopes thus shipped without subsequent chemical processing are referred to as "non-processed irradiations." By and large, those radioisotopes which do not involve a transmutation are included in this group (for example, P 32 produced from P 31, S 35 produced from S 34, etc.) A transmutation may be illustrated by the production of C 14, whose parent is N 14 and not carbon. In the latter case, the chemical difference permits the chemist to separate the new radioactive species, C 14, from the parent, stable nitrogen. In the case of the fission products, whose parent is uranium and of which there are many individual species (for example, barium, iodine, cerium, etc.), the chemical separation must not only remove the radioactive species from the parent uranium but also separate each radioactive element from all the others.

The chemical extraction of radioactive species in quantity requires a very special type of laboratory (a "hot" laboratory) and equipment and personnel experienced in dealing with potentially dangerous material. The radiations which are emitted by the material whose separation must be accomplished require shields of lead or concrete between the material and the chemist or else operating at a distance from the material (since distance can compensate for thickness of shield). Thus, the operator must devise remotely-controlled methods. On the other hand, the amounts of radioactive material with which he works, while emitting large quantities of radiation, are very small in mass or weight, in some cases being entirely invisible; hence, he is working with small equipment, small volumes of solutions, etc., just as he would in an ordinary laboratory. This requires him to be close to his material if he wishes to see what he is doing. These conflicting demands are usually met by the use of heavy shielding which permits closeness, and periscopes which allow the operator to see the material with which he is working around a corner. Since radiations travel in straight lines, there is no danger of the periscope itself permitting a dangerous leakage of radiation from behind the shield.

For many operations in which low levels or low intensities of radiation are encountered, the operator may use distance, perhaps one or two feet, as the shielding, working with tongs and such devices. For the separation of large quantities of fission products, however, a small room (about 4 x 6 x 8 feet, called a "cell") entirely enclosed by two feet of concrete is used. The apparatus for the extraction is placed inside this room with all controls on the outside where the operator and the eye-pieces of the periscopes are located. By means of air pressure, vacuum processes, electrical apparatus, rods and grappling devices, the operator is able to put the radioactive material through the required chemical and physical steps without entering the cell or removing the "hot" material from it.

Instrumentation:

At all times, the chemists who perform such extractions in the "hot" laborawere long enough to permit the gamma radiation, which will come from the open hole, to die off to a relatively low value. Then the hole is opened and the graphite block is pulled out into a lead "coffin." This precaution is necessary because of the radiations being emitted by the exposed material and by the exposure can itself. Technicians stand by with radiation-measuring instruments to insure that no person exposes himself to a hazardous amount of radiation. The samples are removed one by one from the block by means of long tongs, examined with the instruments and then placed in a lead "safe" for temporary storage. Even those samples which emit very little radiation are not picked up with the bare hand. Gloves are always used because of the danger of picking up small amounts of radioactive material from the surface of anything which has once been inside the pile.

<u>Chemical Processing</u>: <u>Separation of Radioisotope from Parent and Impurities</u>:

Many of the cans thus removed from the pile are ready for shipment as they stand, requiring only to be placed in a container with lead walls of sufficient thickness to stop harmful radiation. Radioisotopes thus shipped without subsequent chemical processing are referred to as "non-processed irradiations." By and large, those radioisotopes which do not involve a transmutation are included in this group (for example, P 32 produced from P 31, S 35 produced from S 34, etc.) A transmutation may be illustrated by the production of C 14, whose parent is N 14 and not carbon. In the latter case, the chemical difference permits the chemist to separate the new radioactive species, C 14, from the parent, stable nitrogen. In the case of the fission products, whose parent is uranium and of which there are many individual species (for example, barium, iodine, cerium, etc.), the chemical separation must not only remove the radioactive species from the parent uranium but also separate each radioactive element from all the others.

The chemical extraction of radioactive species in quantity requires a very special type of laboratory (a "hot" laboratory) and equipment and personnel experienced in dealing with potentially dangerous material. The radiations which are emitted by the material whose separation must be accomplished require shields of lead or concrete between the material and the chemist or else operating at a distance from the material (since distance can compensate for thickness of shield). Thus, the operator must devise remotely-controlled methods. On the other hand, the amounts of radioactive material with which he works, while emitting large quantities of radiation, are very small in mass or weight, in some cases being entirely invisible; hence, he is working with small equipment, small volumes of solutions, etc., just as he would in an ordinary laboratory. This requires him to be close to his material if he wishes to see what he is doing. These conflicting demands are usually met by the use of heavy shielding which permits closeness, and periscopes which allow the operator to see the material with which he is working around a corner. Since radiations travel in straight lines, there is no danger of the periscope itself permitting a dangerous leakage of radiation from behind the shield.

For many operations in which low levels or low intensities of radiation are encountered, the operator may use distance, perhaps one or two feet, as the shielding, working with tongs and such devices. For the separation of large quantities of fission products, however, a small room (about 4 x 6 x 8 feet, called a "cell") entirely enclosed by two feet of concrete is used. The apparatus for the extraction is placed inside this room with all controls on the outside where the operator and the eye-pieces of the periscopes are located. By means of air pressure, vacuum processes, electrical apparatus, rods and grappling devices, the operator is able to put the radioactive material through the required chemical and physical steps without entering the cell or removing the "hot" material from it.

<u>Instrumentation</u>:

At all times, the chemists who perform such extractions in the "hot" laboratory depend upon a large variety of instruments for the detection and measurement of radiation from many sources in the building. There are instruments for measuring the general radiation level in the working area, for measuring the radioactivity

MORE

2-B

carried on du particles which may be inhaled, for measuring th extent of contamination on bench tops and other surfaces, for measuring the amount of either soft or penetrating radiation received by any portion of the operator's anatomy, for surveying shoes, clothes or hands for possible radioactive contamination, etc. The trained and careful operator knows which instruments are good for which purposes and depends upon them to the same extent that the aviator in a fog depends upon his instruments. The radiations from radioactive materials can be "seen" only with instruments.

Instruments are not only required for the protection of the individuals who work with radiation but are also necessary for the success of the chemical work. Instruments are built into certain parts of the apparatus in order that the operator may at all times know how much of a radioactive material is at a given point. Electronic radiation-measuring instruments are to the radio-chemist what the balance is to chemists in general and what the microscope is to the bacteriologist; without the proper instruments, he cannot measure or "see" the material with which he is working.

As mentioned above, the mass of a pure radioactive species is very small in relation to its activity. One curie of a radioisotope (roughly equivalent in radioactive disintegration rate to one gram of radium) may be contained in from one gram of material (for example, radium or C 14) to as little as one microgram of material (for example, radioactive iodine or phosphorus). (One microgram is one five-hundred-millionth part of a pound and is too small to be seen with the naked eye.)

The chemist who is separating fission products from uranium is thus confronted with the problem of separating several chemical species in amounts of about a microgram each from a kilogram (thousand grams) amount of uranium. In other words, each fission species is present in a chemical amount which is about one billionth the amount of uranium present.

Shipping:

The final product from a radio-chemical separation of this kind is usually an ounce or so of a water or acid solution containing a "weightless" amount of the radioactive species desired. Since one cannot weigh out fractions of the radioactive material, one depends upon taking fractions of the solution instead. For this reason, such separated "carrier-free" radioactive materials are shipped as solutions in small glass bottles. In order to guard against the dangers of accidental breakage in transit, the bottle is enclosed in a stainless-steel tightly-closed container which is then placed inside a lead case whose walls are sufficiently thick to permit handling en route to the recipient. Thus the shipping container for separated radioactive materials differs from that used for the non-processed materials mentioned above. The latter are solids inclosed in a closed aluminum can when they emerge from the pile and, hence, do not require extensive precautions against leakage of the material. Although most radioactive species emit radiations of such strength as to require lead containers for shipment or handling, others (e.g. C 14 and S 35) emit such weak radiation that the thin aluminum can or a glass bottle or a wooden box is all that is required to stop the radiation. All radioactive materials packed for shipment are measured with the appropriate instruments to be sure that the radiation from the sample is prevented from escaping to the outside and to guard against possible surface contamination of the shipping box with radioactive materials which could be rubbed off in transit.

END

August 2, 1946

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 3425 and 4860

August 2, 1946

BACKGROUND MATERIAL

The Town of Oak Ridge

An important part of the construction at Clinton Engineer Works consisted of the community of Oak Ridge, which was built for the construction and operating personnel. It is a city which had at one time a population of approximately 75,000 inhabitants. This part of the project included the construction, operation, and maintenance of: Dormitories, houses, cafeterias, laundries, schools, churches, stores, theatres, hospital, et cetera; and streets and roads, water supply, sewage system, electrical system, communications, bus transportation, railroad, et cetera.

At the peak of operations, there were about 5,000 trailers; 16,000 hutments and barracks spaces; 9,600 houses (semi-permanent and flat-tops) and 90 dormitories. There are 58 miles of railroad track and 180 miles of streets and roads; over 10,000,000 gallons of water filtered per day; 5,500,000 gallons per day of sewage is the rated capacity of two treatment plants (to serve likewise one of the process plants as well as the community); there are 130 miles of collecting mains with nearly 8,000 service connections. In August 1945, around 840 buses were operated in the transportation system both in and off the area; about 5,500 trips per day were operated inside the area, traveling sufficient mileage to encircle the globe every 24 hours; off-area operations once extended 80 miles from the project, with about 50 bus routes covering 1,200 trips daily, of an aggregate length exceeding 50,000 miles per day.

At the present time, occupancy of homes and units at Oak Ridge is as follows: Semi-permanent type 3,050; apartments, 613; pre-fabs (flat tops), 4,745; victory cottages, 1,019 and trailers 1,700. Forty-five dormitories are in use now. Of the thousands of trailers which were on the Area at the peak of construction, hundreds have been turned back to the Federal Public Housing Authority, which has shipped them to various cities throughout the country to aid in alleviating the housing shortage, especially for veterans. Several score barracks also have been taken over by the FPHA.

As of this date, 211 buses are being operated on the Area and 204 off the Area serving Oak Ridge and the plants.

Of the total of 32,000 persons working on the Area, approximately 30 per cent live in surrounding communities and commute to and from work by bus or in private cars.

At the peak of operations, approximately 45,000 workers lived on the Area and approximately 35,000 off the Area. The 45,000 workers living on the Area, together with women and children, made up the total town population of 75,000.

How the Town of Oak Ridge is Managed and Operated

The town of Oak Ridge was constructed by the United States Government to provide living accommodations for personnel employed at the Clinton Engineer Works. The town, which occupies approximately eight square miles in the northeast corner of a 59,000-acre military area, is managed by the Roane-Anderson Company, a subsidiary of the Turner Construction Company of New York City. The Roane-Anderson Company, which takes its name from the two counties in which the Clinton Engineer Works is situated, holds a fixed-fee Facilities and Services contract with the Government, which provides for payment of a predetermined fixed fee sum regardless of the expenditures made by the Company.

The Roane-Anderson Company performs functions normally carried out by the municipal authorities of the average city, such as maintenance of roads and streets.

The Town of Oak Ridge

An important part of the construction at Clinton Engineer Works consisted of the community of Oak Ridge, which was built for the construction and operating personnel. It is a city which had at one time a population of approximately 75,000 inhabitants. This part of the project included the construction, operation, and maintenance of: Dormitories, houses, cafeterias, laundries, schools, churches, stores, theatres, hospital, et cetera; and streets and roads, water supply, sewage system, electrical system, communications, bus transportation, railroad, et cetera.

At the peak of operations, there were about 5,000 trailers; 16,000 hutments and barracks spaces; 9,600 houses (semi-permanent and flat-tops) and 90 dormitories. There are 58 miles of railroad track and 180 miles of streets and roads; over 10,000,000 gallons of water filtered per day; 5,500,000 gallons per day of sewage is the rated capacity of two treatment plants (to serve likewise one of the process plants as well as the community); there are 130 miles of collecting mains with nearly 8,000 service connections. In August 1945, around 840 buses were operated in the transportation system both in and off the area; about 5,500 trips per day were operated inside the area, traveling sufficient mileage to encircle the globe every 24 hours; off-area operations once extended 80 miles from the project, with about 50 bus routes covering 1,200 trips daily, of an aggregate length exceeding 50,000 miles per day.

At the present time, occupancy of homes and units at Oak Ridge is as follows: Semi-permanent type 3,050; apartments, 613; pre-fabs (flat tops), 4,745; victory cottages, 1,019 and trailers 1,700. Forty-five dormitories are in use now. Of the thousands of trailers which were on the Area at the peak of construction, hundreds have been turned back to the Federal Public Housing Authority, which has shipped them to various cities throughout the country to aid in alleviating the housing shortage, especially for veterans. Several score barracks also have been taken over by the FPHA.

As of this date, 211 buses are being operated on the Area and 204 off the Area serving Oak Ridge and the plants.

Of the total of 32,000 persons working on the Area, approximately 30 per cent live in surrounding communities and commute to and from work by bus or in private cars.

At the peak of operations, approximately 45,000 workers lived on the Area and approximately 35,000 off the Area. The 45,000 workers living on the Area, together with women and children, made up the total town population of 75,000.

How the Town of Oak Ridge is Managed and Operated

The town of Oak Ridge was constructed by the United States Government to provide living accommodations for personnel employed at the Clinton Engineer Works. The town, which occupies approximately eight square miles in the northeast corner of a 59,000-acre military area, is managed by the Roane-Anderson Company, a subsidiary of the Turner Construction Company of New York City. The Roane-Anderson Company, which takes its name from the two counties in which the Clinton Engineer Works is situated, holds a fixed-fee Facilities and Services contract with the Government, which provides for payment of a predetermined fixed fee sum regardless of the expenditures made by the Company.

The Roane-Anderson Company performs functions normally carried out by the municipal authorities of the average city, such as maintenance of roads and streets, sidewalks and public grounds and operation of sewage disposal facilities. In addition, the Company supervises water, coal and electrical distribution in the town.

MORE

The Roane-Anderson Company originally handled practically all of the town services and utilities, but some of the facilities, such as dormitories, houses, cafeterias and restaurants, have generally been let to other operating firms. Those arrangements are treated as sub-contracts of the Roane-Anderson Company, which has a Concessions Department to handle these and other concessions, such as grocery, department and drug stores, service stations, barber and beauty shops, service and repair shops and the like, but the policies under which they operate are set by the Government. All concessions contracts are approved by the Government. There are approximately 220 concessionaires at Oak Ridge, not including such things as picture shows, bowling alleys and recreation facilities, operated by the Recreation and Welfare Association.

Concessionaires pay a certain percentage on their gross receipts to the Government; this percentage covers payment for the building space occupied, utilities, maintenance and the privilege of operating in Oak Ridge. The Government receives the percentage of gross sales from the concessionaire in lieu of rent, heat, light, taxes, etc., and national standards of percentage on gross receipts as set out by recognized agencies are followed in determining the percentage figure paid by the concessionaire. The total income paid by all concessionaires at this time falls short of covering the Government's costs but efforts are being made to equalize the income and outgo.

The Roane-Anderson Company makes no profit through its operation of facilities and all monies which it collects revert to the Government. Audits of the company's accounts are made by the Government and all expenditures and collections are made under Government supervision.

The Oak Ridge bus system is operated by the American Industrial Transit, a Tennessee partnership organized under the laws of Tennessee to operate such facilities. Recreational facilities, such as community centers, playgrounds, picture shows, recreation halls and the like, are handled by the Recreation and Welfare Association, a non-profit organization governed by a council of 14 persons representing the community. The Association operates under a grant of authority from the District Engineer. The Roane-Anderson Company has no supervision over either the Recreation and Welfare Association or the American Industrial Transit. The three are separate and distinct organizations, but all are under Government supervision.

Criminal and civil laws of the State of Tennessee apply to the area encompassed by the Clinton Engineer Works and are enforced by the Police Department in cooperation with the law enforcement officials of Roane and Anderson counties. Some members of the Police Department are deputized as county law enforcement officers.

There are no elected governing officials in the town of Oak Ridge. By virtue of his responsibility for administration of the Roane-Anderson, AIT and other contracts, the Chief of the Central Facilities and Services Section of the USED is in a position roughly analogous to that of a city manager.

Working with and advising the Central Facilities and Services Section to maintain proper standards of community operations is the Central Facilities Committee, members of which represent the various prime-contractors organizations on the Area.

Suggestions and advice are also received from the Town Council and civic groups.

Employment and Population

The present population of Oak Ridge is approximately 43,000. Peak population on August 6, 1945 was approximately 75,000. Peak employment was around 80,000 but since V-J Day thousands of construction workers have left and the operating plants have cut down. Present overall employment is slightly over 32,000, this including an estimated 4,700 concessionaires who operate the stores, service establishments, etc. Sixty-five per cent of the employees are men and 35 per cent women.

Comparative figures for August 6, 1945 and August 6, 1946, for employment by major operating companies and units operating at Oak Ridge follow (exclusive of construction personnel, Army personnel, and miscellaneous):

shows, bowling alleys and recreation facilities, operated by the Recreation and Welfare Association.

Concessionaires pay a certain percentage on their gross receipts to the Government; this percentage covers payment for the building space occupied, utilities, maintenance and the privilege of operating in Oak Ridge. The Government receives the percentage of gross sales from the concessionaire in lieu of rent, heat, light, taxes, etc., and national standards of percentage on gross receipts as set out by recognized agencies are followed in determining the percentage figure paid by the concessionaire. The total income paid by all concessionaires at this time falls short of covering the Government's costs but efforts are being made to equalize the income and outgo.

The Roane-Anderson Company makes no profit through its operation of facilities and all monies which it collects revert to the Government. Audits of the company's accounts are made by the Government and all expenditures and collections are made under Government supervision.

The Oak Ridge bus system is operated by the American Industrial Transit, a Tennessee partnership organized under the laws of Tennessee to operate such facilities. Recreational facilities, such as community centers, playgrounds, picture shows, recreation halls and the like, are handled by the Recreation and Welfare Association, a non-profit organization governed by a council of 14 persons representing the community. The Association operates under a grant of authority from the District Engineer. The Roane-Anderson Company has no supervision over either the Recreation and Welfare Association or the American Industrial Transit. The three are separate and distinct organizations, but all are under Government supervision.

Criminal and civil laws of the State of Tennessee apply to the area encompassed by the Clinton Engineer Works and are enforced by the Police Department in cooperation with the law enforcement officials of Roane and Anderson counties. Some members of the Police Department are deputized as county law enforcement officers.

There are no elected governing officials in the town of Oak Ridge. By virtue of his responsibility for administration of the Roane-Anderson, AIT and other contracts, the Chief of the Central Facilities and Services Section of the USED is in a position roughly analogous to that of a city manager.

Working with and advising the Central Facilities and Services Section to maintain proper standards of community operations is the Central Facilities Committee, members of which represent the various prime-contractors organizations on the Area.

Suggestions and advice are also received from the Town Council and civic groups.

Employment and Population

The present population of Oak Ridge is approximately 43,000. Peak population on August 6, 1945 was approximately 75,000. Peak employment was around 80,000 but since V-J Day thousands of construction workers have left and the operating plants have cut down. Present overall employment is slightly over 32,000, this including an estimated 4,700 concessionaires who operate the stores, service establishments, etc. Sixty-five per cent of the employees are men and 35 per cent women.

Comparative figures for August 6, 1945 and August 6, 1946, for employment by major operating companies and units operating at Oak Ridge follow (exclusive of construction personnel, Army personnel, and miscellaneous):

	August 6, 1945	August 6, 1946
Carbide	11,263	8,290
Tennessee Eastman	22,328	9,950
Monsanto	1,234	1,572
Roane-Anderson (operators of town of Oak Ridge)	7,549	3,350
American Industrial Transit (operators of bus system)	1,072	670
USED Civilian Personnel	1,016	1,460

In production, research, construction and services (including concessionaires) but including the management contractor for the town of Oak Ridge, the Roane-Anderson Company, a total of 20,690 persons have been hired from September 1945, to the present, with 59,130 having been terminated or quit of their own volition.

OAK-RIDGE

The town of Oak Ridge is laid out on the long sloping side of a ridge—once known as Black Oak Ridge—is in a hilly wooded section 1½ miles wide and 6 3/4 miles long in the northeast corner of the 59,000-acre Government reservation known as the Clinton Engineer Works. Oak Ridge was named in June of 1943 through a contest among employees held by the District Engineer.

Much of the town was laid out with rear entrances toward the street and with approaches and main entrances facing spacious grassed and wooded areas. Over the greater part of the town the raw scars of construction have now been covered by resident-created lawns and gardens, with the result that the community has a pleasing aspect.

As Architect-Engineer-Manager for all of the early construction at Clinton Engineer Works, Stone & Webster Engineering Corporation was assigned the job of providing living quarters for personnel necessary to plant operation. This phase of the development was turned over to the architectural firm of Skidmore, Owings and Merrill, of Chicago and New York which prepared building plans and town layout based on housing designs developed by the John B. Pierce Foundation. The A-E-M firm, however, was responsible for coordination of the work, procurement of materials, contract supervision and construction of roads and utilities.

Additional Data on Oak Ridge

Hospital:

The Oak Ridge Hospital, built and equipped by the Government, is operated by the Roane-Anderson Company under policies defined by the Government. Civilian doctors using facilities of the hospital have office space adjacent to the hospital. Their applications to practice at Oak Ridge are passed upon by a Hospital Board of Governors, composed of top officials of the principal operating companies, which recommend policies to the District Engineer in hospital administrative matters.

Schools and Churches:

The Oak Ridge School system, which is complete from Kindergarten through high school, is operated by funds supplied by the Federal Government. The schools are part of the State and County Public School System but are under the immediate direction of a superintendent in Oak Ridge. Accrediting and inspection are under jurisdiction of State school authorities. The High School is situated on a hill overlooking the main business center on Kentucky Avenue and the eight elementary schools are scattered at convenient points throughout the Area. All schools have modern classrooms, laboratories, shops, gymnasiums, auditoriums and libraries.

Facilities for church services are made available for various denominations and organized religious groups. Assignment of facilities are limited by the number of buildings available and the comparative size of the groups. Sixteen church groups are on the Area. Under a new policy, groups can build their own churches on the Area if they desire to do so.

Telephone System:

In production, research, construction and services (including concessionaires) but including the management contractor for the town of Oak Ridge, the Roane-Anderson Company, a total of 20,690 persons have been hired from September 1945, to the present, with 59,130 having been terminated or quit of their own volition.

OAK-RIDGE

The town of Oak Ridge is laid out on the long sloping side of a ridge--once known as Black Oak Ridge--is in a hilly wooded section 1½ miles wide and 6 3/4 miles long in the northeast corner of the 59,000-acre Government reservation known as the Clinton Engineer Works. Oak Ridge was named in June of 1943 through a contest among employees held by the District Engineer.

Much of the town was laid out with rear entrances toward the street and with approaches and main entrances facing spacious grassed and wooded areas. Over the greater part of the town the raw scars of construction have now been covered by resident-created lawns and gardens, with the result that the community has a pleasing aspect.

As Architect-Engineer-Manager for all of the early construction at Clinton Engineer Works, Stone & Webster Engineering Corporation was assigned the job of providing living quarters for personnel necessary to plant operation. This phase of the development was turned over to the architectural firm of Skidmore, Owings and Merrill, of Chicago and New York which prepared building plans and town layout based on housing designs developed by the John B. Pierce Foundation. The A-E-M firm, however, was responsible for coordination of the work, procurement of materials, contract supervision and construction of roads and utilities.

Additional Data on Oak Ridge

Hospital:

The Oak Ridge Hospital, built and equipped by the Government, is operated by the Roane-Anderson Company under policies defined by the Government. Civilian doctors using facilities of the hospital have office space adjacent to the hospital. Their applications to practice at Oak Ridge are passed upon by a Hospital Board of Governors, composed of top officials of the principal operating companies, which recommend policies to the District Engineer in hospital administrative matters.

Schools and Churches:

The Oak Ridge School system, which is complete from Kindergarten through high school, is operated by funds supplied by the Federal Government. The schools are part of the State and County Public School System but are under the immediate direction of a superintendent in Oak Ridge. Accrediting and inspection are under jurisdiction of State school authorities. The High School is situated on a hill overlooking the main business center on Kentucky Avenue and the eight elementary schools are scattered at convenient points throughout the Area. All schools have modern classrooms, laboratories, shops, gymnasiums, auditoriums and libraries.

Facilities for church services are made available for various denominations and organized religious groups. Assignment of facilities are limited by the number of buildings available and the comparative size of the groups. Sixteen church groups are on the Area. Under a new policy, groups can build their own churches on the Area if they desire to do so.

Telephone System:

Operators in the Oak Ridge telephone exchange handle approximately 1,600 long-distance calls per day, 3,000 information calls daily, and about 22,000 local calls. The dial equipment in the plant areas handled approximately 80,000 calls daily in August of 1945 and now handles approximately 45,000.

MORE

Organizations:

There are around 90 active organizations of all kinds at Oak Ridge. Some of them are Kiwanis, Rotary, Civitan and Lions Clubs, League of Women Voters, Junior Chamber of Commerce, American Legion, College Women's Club, Girl Scouts of America, Oak Ridge Music Society, Oak Ridge Little Theatre and the Association of Oak Ridge Scientists.

Births and Deaths:

Since the establishment of Clinton Engineer Works, 2,810 babies have been born at the Oak Ridge Hospital. There have been 344 deaths at Clinton Engineer Works during the same period.

END

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 3425 and 4860

BACKGROUND MATERIAL

CLINTON LABORATORIES

Initial objectives of Clinton Laboratories were to produce experimenta quantities of fissionable materials for use in research work essential to t development of the atomic bomb, to assemble technical information necessary assure successful operation of a large scale production plant at Hanford, a to train some of the key men needed to operate the production plant. These objectives were successfully accomplished in the one year which elapsed bet start of operations at Clinton Laboratories in September, 1943, and the sta of the Hanford plant.

The design, construction and initial operation of Clinton Laboratories by large numbers of top flight physicists, chemists and engineers working a the University of Chicago and at Clinton Laboratories in close cooperation the technical and engineering staff of E. I. du Pont de Nemours and Company Directing the project from a scientific angle was Dr. A. H. Compton, Nobel physicist, then with the University of Chicago, and now Chancellor of Washi University, St. Louis.

Operation of Clinton Laboratories was taken over by Monsanto Chemical St. Louis, at the request of the Manhattan Engineer District on July 1, 194 Dr. Charles Allen Thomas, vice president and technical director of Monsanto Chemical Company, is the project director of Clinton Laboratories; Dr. E. P Wigner, formerly professor of mathematical physics at Princeton, is now res and development director; Dr. James H. Lum, formerly assistant director of Monsanto's Central Research Laboratories, is now executive director.

Employment at Clinton Laboratories has risen from a wartime peak of 1, to 1,572.

Expansion projects at Clinton Laboratories, thus far announced, includ

1. Design, construction and operation of the first nuclear energy pla for the production of electric power; this is to be done by Monsanto Chemica Company, utilizing a scientific foundation laid by scientists of the Univer of Chicago. The plans for this "pile" are still on the drawing board and n construction contract has yet been let,

2. Installation of a 100,000,000-volt betatron, a Van de Graaff machi an electron-microscope and other essential pieces of equipment,

3. Establishment of a training school, which is to start operation ab September 1, 1946.

END

8-2-46

FUTURE RELEASE

PLEASE NOTE DATE

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E   R E L E

FOR RELEASE FRIDAY A.M., AUGUST 2, 1946

CAMP UPTON TO BE SITE
OF NEW ATOMIC RESEARCH CENTER

Major General L. R. Groves, Commanding General of the Manhattan Project announced the selection of Camp Upton, New York, as the site of the proposed northeast National Laboratory, one of three research centers for work in nuc physics.

The Long Island campsite had been declared surplus by the War Departme was withdrawn from surplus lists and transferred to the Manhattan Project tc permanent site of an atomic research center.

Nine of the major educational institutions of the northeastern part oi United States have formed Associated Universities, Inc., incorporated under laws of New York, to operate the laboratory under contract with the governme

Members of Associated Universities, Inc., are:

Columbia University
Cornell University
Harvard University
Johns Hopkins University
Massachusetts Institute of Technology
University of Pennsylvania
Princeton University
University of Rochester
Yale University

Policies under which the research center will be operated will allow scientists and graduate students from any school to make use of the facilit the laboratory for approved research projects.

Purpose of the laboratory is to study fundamental problems of nuclear and to carry out investigations on the applications of atomic energy.

Facilities to cost more than $5,000,000 initially will be available f fundamental and applied science as well as studies of the application of nu knowledge to science and engineering.

Financial support will come from the Government through reimbursement contract-operator, Associated Universities, Inc., for all costs. The Manha Project, the War Department agency which produced the bomb and which has be sponsible for the nation's atomic energy facilities, has allotted funds for work

General Groves said the entire program as an organic part of the Manha Project would be transferred to the new atomic energy authority whenever the authority is established.

The new national laboratory is one of several contemplated laboratorie throughout the United States. The Argonne National Laboratory at Chicago is in operation under a similar management contract. A third is planned for th west. Also part of the facilities of the Clinton Engineer Laboratory at Oak Tennessee, will be available for research projects in connection with the co ted national program.

Edward Reynolds, vice president of Harvard, has been elected President Associated Universities, Inc. Executive Committee for the group is:

Mr. Reynolds
George A. Brakely, vice president and treasurer of Princeton
P. Stewart McCaulay, Provost, Johns Hopkins University
Dr. R. F. Bacher of Cornell
Dr. J. R. Zacharias, MIT

Trustees elected by the corporation for the first year of operations a

George B. Pegram, Dean, Graduate School and I. I, Rabi, head of Physic Department, Columbia University
G. B. Kistiakowsky, Professor of Chemistry and Edward Reynolds, vice president, Harvard University
Robert D. Fowler, Professor of Chemistry and P. Stewart McCauley, Prov Johns Hopkins University
J. R. Killian, vice president and J. R. Zacharias, Professor of Physic Massachusetts Institute of Technology
William H. DuBarry, vice president and Louis M. Ridenour, Professor of Physics, University of Pennsylvania
George A. Brakely, vice president and treasurer and Henry D. Smyth, Pr of Physics, Princeton University
G. B. Collins, Professor of Physics, and Raymond L. Thompson, treasure University of Rochester
Edmund W. Sinnott, Dean, Sheffield Scientific School and William W. Wa Professor of Physics, Yale University.

END

DISTRIBUTION: Aa, Af, B, D (except Do), Mb, Sc.
8-1-46

FUTURE RELEASE

PLEASE NOTE DATE

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E   R E L E A S E

FOR RELEASE IN MORNING PAPERS THURSDAY, AUGUST 15, 1946

ATOMIC ENERGY LECTURES
TO OPEN IN WAR DEPARTMENT

Secretary of War Robert P. Patterson has directed that the heads of War Department activities and their key personnel become acquainted with all phases of atomic energy and its relation to the military organization of the United States and for that purpose a special course on atomic energy has been organized.

Purpose of the course is to acquaint those intimately charged with the training, organization and doctrine of the Army with the limitations and capabilities of atomic energy and its effects on methods of warfare so that full and integrated consideration can be given this new development in future planning.

The course which will be conducted by eminent atomic physicists will consist of eight one-hour lectures. Lectures will be held in Room 5A-1070, The Pentagon, from 4 p.m. to 5 p.m. on August 27 and 29, and September 3, 5, 10, 12, 17 and 19.

The course will be opened with brief introductory addresses by the Secretary of War, the Honorable Robert P. Patterson and the Chief of Staff, General of the Army Dwight D. Eisenhower.

It will be divided into four parts: Three lectures on necessary background material will be given by Dr. R. E. Gibson, of the Applied Physics Laboratory, Johns Hopkins University, located at Silver Spring, Maryland, and of the Carnegie Institute, Washington, D. C.

Dr. L. F. Curtis of the National Bureau of Standards, Washington, D. C., will give a practical demonstration on the characteristics of various fissionable material. Three lectures by Dr. H. H. Wensel, of the Scientific Liaison Group, Research and Development Division, War Department General Staff, will deal with the military application of atomic energy.

The course will be closed by Major General Lauris Norstad, Director of Plans and Operations Division, War Department General Staff. In the final one-hour lecture General Norstad will summarize present War Department plans for the use of atomic energy.

The following War Department divisions are expected to be represented among those attending the course:

MORE

Office, Secretary of War; Office, Under Secretary of War; Office, Assistant Secretary of War; Office, Assistant Secretary of War for Air; Office, Chief of Staff; Office, Deputy Chief of Staff; General Staff Committee for National Guard and Reserve Policy; Secretariat, War Department General Staff; all War Department Special Staff Divisions; all War Department Administrative and Technical Services; the Army Ground Forces; the Army Air Forces; the Military District of Washington.

END

DISTRIBUTION: Aa, Af, B, D (Except Do) Sc, N.
8-14-46

FUTURE RELEASE

PLEASE NOTE DATE

WAR DEPARTMENT
Public Relations Division
PRESS SECTION, AAF
Tel. - RE 6700
Ext. 73868 and 74454

F U T U R E R E L E A S E

FOR RELEASE MONDAY A.M., AUGUST 19, 1946

AAF BEGINS NEW STUDY
OF UPPER AIR REGIONS

The Army Air Forces will begin its second extensive study of the upper air regions today when a Boeing B-29 Superfortress will land at Boston to report to Dr. Bruno Rossi, of the Massachusetts Institute of Technology, for further research on cosmic ray and mesons.

The plane will leave Dayton, Ohio, this morning and fly to Boston to pick up special equipment and technicians being provided by M.I.T. for the most extensive series of flights yet planned in the upper air regions. The Geiger counters to be used have been designed by Dr. Marcel Schein, of the University of Chicago.

AAF scientists said the recently-completed flights made by the AAF with the National Geographic Society and the Bartol Research Foundation were the beginning of many such studies of the cosmic ray. Current experiments will delve even deeper into the mysteries of the mesons, which result from the bombardment of the earth's atmosphere by cosmic rays.

Mesons were described as particles of energy which form part of the breakup of the cosmic ray in the earth's atmosphere. The most energetic of the known mesons are 100 million million times as powerful as the particles released by the atom bomb. However, scientists doubt that this power will ever be harnessed.

AAF scientists believe it may be possible to simulate the cosmic ray, and thereby synthetically produce mesons. The results of the forthcoming flights in cooperation with Dr. Rossi and his staff of M.I.T. may provide a final solution of this possibility.

The entire study is a continuation of exploration into atomic matter. It is believed the energy from mesons would enable science to make complete use of the core of the atom, which never has been wholly used. If this energy could be developed it is thought that atoms other than those of uranium could be utilized for power.

Lieutenant Charles C. Davis, of Playa Del Ray, California, will pilot the B-29 on the tests. His crew has been selected from personnel of the Smokey Hill Army Air Base at Salina, Kansas. Wright Field, Ohio, technicians will accompany the crew, taking special instruments owned by the AAF.

The plane will use Bedford Army Air Base, near Boston, as its base for these flights.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dg, Dm, E, Ea, N.
8-17-46

FUTURE RELEASE

PLEASE NOTE DATE

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E   R E L E A S E

FOR RELEASE UPON DELIVERY

REMARKS BY
THE HONORABLE ROBERT P. PATTERSON, SECRETARY OF WAR,
AT THE OPENING OF THE ATOMIC ENERGY LECTURE SERIES,
ROOM 5A1070, THE PENTAGON, AT 4:00 P.M., EST, TUESDAY, AUGUST 27, 1946

I confess at the outset that I do not yet understand the theory of atomic energy, and I am resigned to the conclusion that I will never be expert in its future exploitation. I expect to attend this course and will learn as much as I can. But I do know this, that the effect on military operations brought about by the atomic bomb will be profound. It has become trite to say that the coming of the atomic bomb has brought about a revolutionary change, but the triteness must not obscure the fact that the statement is nothing more than the truth.

First, I will touch briefly on the part taken by the Army in promotion of the atomic energy project. It is recent history, and it is a record in which all Army personnel should feel the greatest pride. While there had been many earlier discoveries in nuclear physics, it was not until 1939 that the fissionability of uranium was discovered. The possible military importance of the discovery was laid before the President a few months later. Under his direction a program of pioneering was carried forward by committees of scientists. In 1942 the President, having been advised that the indications of successful utilization of atomic energy as a weapon of war were sufficiently promising to warrant large-scale operations, determined to commit the project to the War Department. The Department never assumed a greater responsibility. Signs of the times pointed to a race between the United States and Germany for the first atomic bomb, with the winning of the war as the direct prize.

Secretary Stimson turned to the Corps of Engineers, and the Manhattan District under command of General Groves was created as a separate project. Speed and security were of urgent importance, and it was in recognition of these factors that the project was handled on a basis independent of normal War Department channels. In war production the Manhattan District had supreme priority as to all demands for manpower and materials. I will mention only the high-lights of the project. Under direction of General Groves the uranium ore was obtained; the industrial plants were built; the plants were operated; the bombs were produced and were dropped on Hiroshima and Nagasaki. All of this was achieved in the short span of three years. Two billions in dollars were expended; 120,000 people were engaged directly in the undertaking.

The project was an unqualified success. The value of the work done by scientists and industrial engineers cannot be stressed too strongly. But we should at the same time not lose sight of the fact that the leadership, the direction and

MORE

management of the enterprise from the time of the beginning of large-scale operation, was the direct responsibility of General Groves and his assistants. The Army Air Forces did their part by dropping the two atomic bombs on Japan, and the Japanese immediately surrendered. The performance from first to last is a brilliant chapter in the history of the United States Army.

With success of the war project fairly predictable in the early part of 1945, Secretary Stimson took the initiative of outlining national policy for long-range development of atomic energy. He appointed a committee of eight distinguished citizens to consider the matter. A group better qualified to cope with the problem could not have been selected. The conclusions of that committee were, in essence, that future promotion of atomic energy in the United States should be the duty of a new civilian agency, with fitting participation by the military, and that ownership and control in the field of atomic energy should be retained by the Government Months of discussion and debate followed. While the position of the War Department was frequently misrepresented to the public, the discussion on the whole was informative and was in line with democratic traditions. The law as finally enacted, although not the bill recommended by the Stimson committee, carries out the objectives first formulated by that committee. The law calls for a civilian commission of five, with a division of military application to be headed by a member of the armed forces and also with a military liaison committee to be appointed by the Secretary of War and Secretary of Navy. The appointment of the new commission has not yet been announced by the President.

The change that is imminent is one of great importance. From a time when the War Department has had complete responsibility for atomic energy we will pass, any day now, to a time when the War Department will confine its attention to the military utilization of atomic energy. But that in itself is a heavy charge, and we face a period in which our best powers in the way of initiative and resourcefulness will be demanded.

It has been predicted, and by people whose views cannot be lightly dismissed, that the armed forces will not be equal to this responsibility, that the military people will not adjust their thinking and planning to the atomic bomb, that they will adhere simply to the old military concepts.

The Army, I am confident, will defeat that prediction. It will do so, despite the temptation to plan a future war in terms of the last war. The tactical employment of new weapons, and of this weapon in particular, will not be allowed to lag behind availability. The effect in planning should be felt in two ways---what we can do, and what we need no longer do. It should be made in plans for offensive operations and in plans for defensive measures. The constant intercourse between the scientists and the soldiers, so thoroughly carried on in the last war, will be maintained.

Already a weapon has been developed that is destructive beyond anything imaginable when the last war began. As if this were not enough, it is reasonably clear that there will be improvements in the atomic bomb we know about. Military planning on all levels must be kept abreast of this new fact in the world we live in and in the world that lies ahead.

I am mindful of the strong effort being made to bring about international control of atomic energy, to the end that it shall not be used as a weapon. The

MORE

United States has a sound plan for this purpose. The plan has not yet been accepted. I hope that it will be. It goes without saying however that those responsible for the defense of the nation must make their plans on the basis that there is and will be no adequate control on the international level, — this until the time when we may be directed by the Congress to plan on another basis.

The need today, above all else, is to foster the team-work of scientists, both academic and industrial, and the military, the scientists to be kept aware of military requirements and the military to be kept aware of scientific discoveries. In this interchange, and in the flexible planning that should accompany it, will be found the best assurance of national security that can be devised.

END

DISTRIBUTION: N. Y.
8-27-46 - 4:00 PM

FUTURE RELEASE
PLEASE NOTE DATE

WAR DEPARTMENT
Public Relations Division
PRESS SECTION, AAF
Tel. RE 6700
Ext. 73868 and 74454

F U T U R E   R E L E A S E

FOR RELEASE IN NEWSPAPERS OF SUNDAY, SEPTEMBER 1, 1946

UNFAMILIAR "MESONS" STUDIED
BY AAF TECHNICIANS

A little-known type of matter referred to by scientists as "mesons" is under investigation by Army Air Forces technicians in connection with current cosmic ray experiments.

The story of their creation discloses the existence of a phenomenon in outer space which results in a continuous rain of high-energy particles on the earth's surface.

Microscopic particles of tremendous energy, originating somewhere in outer space, strike the earth's atmosphere at a speed slightly under that of light and begin a chain reaction which continues indefinitely and produces other particles of energy, AAF scientists explained. The result is a continual "bombardment" of the earth.

The original particles of energy are the familiar cosmic rays now being studied by AAF scientists in cooperation with scientists of the Massachusetts Institute of Technology. The AAF researchers pointed out these "rays" were actually material particles of energy with terrific penetrating power. The present tests will not study the original particle of energy, but the by-product of the cosmic ray which breaks up when striking particles of air in the upper atmosphere.

In discussing the experiments, AAF scientists said a Boeing B-29 Superfortress was selected to make all flights necessary in the research because it could carry all required equipment to the altitudes desired. Sets of Geiger counters, some operated by M.I.T. and others by the AAF, will measure the intensities of the little known "meson". Studies will be conducted at various altitudes up to 35,000 feet.

The AAF recently completed extensive studies of the cosmic ray in cooperation with the Bartol Research Foundation and the National Geographic Society, using the B-29 in flights as far south as Peru.

AAF scientists gave a detailed description of the origin and the known characteristics of mesons. Protons, better known as cosmic rays, they explained, originate at an unknown source in space and "bombard" the earth's atmosphere at terrific speeds, attaining a speed probably slightly less than that of light, which is approximately 186,000 miles a second.

MORE

The protons, which are microscopic particlos that could be seen by the nakod eye if gathered in sufficient quantity, strike particles of air at these tremendous speeds and are destroyed, but simultaneously they crack the core of atoms in the atmosphere, thereby releasing atomic energy.

The original energy of the proton is added to that of the atom, producing new particles of energy called "mesons". Approximately five mesons, of varying strength, are produced in the collision of one proton with particles of the atmosphere.

Creation of the mesons produces a chain reaction, as mesons die in 1/500,000th of a second but, in so doing, produce electrons. The electrons in turn produces photons, which are purely rays, similar to X-rays, and each photon produces two other electrons. This reaction continues indefinitely.

The present study is concerned only with the slower-moving mesons. As very few protons, or cosmic rays, arrive at the lower regions before colliding with air particles, high altitudes must be reached before an extensive study of the mesons can be made. Therefore, Dr. Bruno Rossi of M.I.T. and AAF scientists agreed to use the B-29 to attain high altitude for long periods of time.

Previously, the M.I.T. scientists had considered using other types of aircraft to study meson activity at lower altitudes. This plan was abandoned when the AAF offered a B-29 for all tests, since it was agreed that moving the heavy equipment in the midst of the experiments would be impractical.

Special AAF Geiger counters, designed and supervised by Dr. Marcel Schein of the University of Chicago, will offer members of the AAF Scientific Advisory Board data on cosmic rays and mesons needed in their specialized study of the upper air regions.

The research is being concentrated on the slower mesons because it then will be possible to estimate the number of original protons which penetrate the atmosphere at various altitudes. High speed mesons cannot be used as they might be formed at extreme heights and are able to arrive in the lower regions within the 1/500,000th of a second before dying.

Despite the terrific energies released in the formation of mesons and the amazing speed of cosmic rays, scientists do not believe it is possible to harness this power effectively. However, the AAF scientists point out that the information from these studies might enable more complete use of atomic energy, as information on how atomic nucleii are put together can be obtained from the activities of the cosmic rays and mesons.

The scientists said only a tiny part of the total energy of the uranium atom was being utilized at present, and that if the total could be used, it would mean present atomic power could be increased by 1,000 times.

Protons, described as having the characteristics of the nucleus of the hydrogen atom, have been producod in laboratories, but nothing has been devised to give them the terrific speeds necessary to form mesons, so the studies of mesons must continue in the upper air regions.

MORE

The Army Air Forces plans continued extensive study of the cosmic ray in cooperation with M.I.T. and other leading scientific groups. Present flights will continue at least four months, and other series of flights will be made soon in cooperation with California Institute of Technology, when altitudes exceeding 40,000 feet will be reached in specially modified B-29's.

The results of these studies will be reviewed by the 31 prominent scientists who comprise the AAF Scientific Advisory Board, headed by Dr. Theodore Von Karman, Director of the Guggenheim Aeronautical Laboratory at California Institute of Technology. If their review of the results of these tests and other experiments conducted by civilian organizations reveals material worthy of further investigation by the AAF, they will recommend this investigation to the Commanding General of the AAF, and he will instruct the Air Materiel Command at Wright Field to authorize further study by contract with civilian organizations.

It is likely that many outstanding universities and science organizations will be called upon to make further studies of scientific problems for the AAF, since the AAF has neither the facilities nor the skilled personnel to conduct extensive research.

Close liaison is being maintained with civilian groups and other military services to arrange the exchange of vital information on scientific projects.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dg, Dm, E, Ea, N, Sc.
2:00 P.M.

IMMEDIATE RELEASE
PRESS AND RADIO

SEPTEMBER 3, 1946

JOINT WAR-NAVY-STATE DEPARTMENT RELEASE

NEW NATIONAL WAR COLLEGE OPENS WITH 100 HIGH-RANKING OFFICER STUDENTS

The National War College, the first school established in this country to promote integration and understanding between the highest levels of the armed services and the Department of State, was opened today by the Commandant, Vice Admiral Harry W. Hill, U.S.N. The new college occupies the site of the former Army War College in Washington, D. C.

In his opening address to the student body, Vice Admiral Hill said:

"Recent technological developments have brought us to the threshold of a new age. The implications of nuclear physics and the atomic bomb may require a complete reorientation of our old ideas regarding national policy and security. Because of that, it is doubly important that you keep your minds flexible and free of any preconceived ideas."

Operating under the direction of the Joint Chiefs of Staff, with the cooperation of the Department of State, the College trains ranking Army, Navy, Air Force, and Department of State officers for duties in the highest echolons of the Government services.

The integration of foreign and military policies of the United States will be stressed throughout the course. The curriculum will include, in addition to military strategy, the role of the United Nations as a preventative of armed conflict, of the factors of power as they bear upon the Nation's ability to wage total war, and of the objectives of the United States in its international relations.

The course of instruction is divided into two semesters. Lectures of the first semester will cover the impact of science and technology on war, international politics, basic conflicts in international relations, and measures of peaceful pressure and adjustment. Concurrently, studies in the war potential of selected nations will receive critical attention. Through these courses the class should arrive at an understanding of United States policy and its objectives.

The students were divided into committees today for their first sub-course, "Security in the Atomic Age," in which they will study all aspects of the problem of international control of atomic energy. Outstanding authorities who will address the class on this subject include James B. Conant, President of Harvard University; Senator Brien McMahon of Connecticut, author of the McMahon bill; John M. Hancock, of Bernard Baruch's Atomic Energy Commission staff; Charles A. Thomas, vice president of the Monsanto Chemical Company and a member of the

Lilienthal Board; J. Robert Oppenheimer, former director of the Los Alamos Laboratory of the Manhattan Project and a member of the Lilienthal Board; Bernard Brodie of Yale University; Vice Admiral W. H. P. Blandy; and Major General Leslie R. Groves.

In the second semester, from January through June, 1947, military studies involving the implementation of national policies will be emphasized. Military power as a means towards an end will be the theme, with planning on the level of the Joint Chiefs of Staff receiving special attention.

An important part of the curriculum which has resulted from experiences in World War II is a course of science appreciation. It is designed to produce an understanding between scientists and military planners in the hope that scientific developments will be utilized to the maximum.

The student body of 100 is composed of 90 Army, Navy and Air Force colonels and captains, equally divided, and 10 Department of State and Foreign Service officers. Selected individuals who served in all parts of the globe in the multifarious activities of a nation at war assure adequate representation of thought and experience within the student body. Among them is Colonel John H. Kane, Air Corps, who holds the Congressional Medal of Honor for having led the first low altitude heavy bombing strike against the Ploesti oil refineries in 1943. Captain K. G. Hensel, U.S.N., commanded a submarine on a successful patrol off the mouth of Tokyo Bay, and Colonel Alan Shapley, U.S.M.C., served with Carlson's Raiders and later commanded one of the regiments at Okinawa in its final assault on Shuri Ridge.

The faculty also is well rounded in world-wide professional experience. There are four civilian professors on the staff. Mr. Hardy C. Dillard, University of Virginia, who served with the School of Military Government during the war, is Director of Studies. Mr. Walter L. Wright, Jr., Princeton University, former President of Robert College in Istanbul, Turkey, was the War Department's Chief Historian during the war. Mr. Bernard Brodie, Yale Institute of International Studies, was with the Navy's Bureau of Ordnance and was loaned to the State Department for duty at the San Francisco Conference. Mr. Sherman Kent. also of Yale, was a key member of the Office of Strategic Services during the war and later served in the State Department. The qualifications of the four prominent scholars are balanced by those of the military members of the faculty, all of whom were selected for their new tasks on the basis of their qualifications.

The Commandant, Vice Admiral Hill, is assisted by two deputy commandants, Major General Alfred M. Gruenther and Brigadier General Truman H. Landon. The Deputy for Foreign Affairs is Mr. George F. Kennan, Department of State, who was Counselor of Embassy at Moscow from May, 1944, to May, 1946, and who has a career of 20 years in the Foreign Service.

Much of the instruction at the National War College has been united with that of the Industrial College of the Armed Forces which is located in the building immediately adjacent.

***

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E R E L E A S E

FOR RELEASE UPON DELIVERY

ADDRESS BY
THE HONORABLE KENNETH C. ROYALL, UNDER SECRETARY OF WAR,
BEFORE THE NORTH CAROLINA FOOD DEALERS ASSOCIATION,
WRIGHTSVILLE BEACH, N. C. AT 7:30 P.M. EST, MONDAY,
SEPTEMBER 9, 1946.

In the last several years my duties have taken me to many parts of Europe, Asia and Africa. I have seen the sad results of totalitarian governments and of pseudo-popular governments -- who use the name of democracy only as a screen for despotism -- governments whose people have a standard of life far below anything in America -- far below what Americans had, even two hundred years ago.

And in all this I have seen unrest and ignorance -- and envy and suspicion of other nations -- the embers that could well start another world conflagration.

After each trip I have returned home with a deeper sense of thankfulness that I am an American -- and with a more fixed determination that the United States must avoid a world conflict, if it is possible to do so. I returned too, more convinced each time, that if such a conflict comes in spite of our efforts, then America must be able to protect itself and its method of government and its mode of life -- to protect the highest standard of life of any nation at any period in history.

And my travels have shown me something else -- that distance has largely disappeared as a defense to this or any other country -- that we cannot withdraw into a hole of isolationism -- we cannot hide our heads in the sands, with the hope that the storm will blow around us and leave us untouched.

We are the richest prize on earth, and we can be reached by a single airplane flight in a matter of hours -- reached from any point on the globe. If we are lacking in adequate defense, we would be the first object of attack if war should come.

And -- more important -- if we are militarily weak, we will be a war temptation to any piratical nation. Our very weakness in peace would endanger the peace itself.

MORE

Realists who see the world as it is, know that the best guarantees of peace are, first, an honest and sincere and unselfish attitude toward the rest of the world and, second, a readiness to defend ourselves and support our international commitments -- a readiness which is apparent to all nations.

Without a desire for peace, an armed strength might be a temptation for us to fight unnecessarily. And without armed strength a desire for peace would be a futile case of wishful thinking. We have seen such thinking fail of results in the days preceding World War II.

We must have an adequate national defense. The War Department has built -- and is building -- its plans with an eye single to the necessity of such defense. We want no frills and furbishes. We plan none. We want no facilities and duties except those that are necessary to provide protection for this nation and its principles, in case such protection should be needed in the future.

We have made plans -- plans not only for men and not only for the strict implements of war. Our program also embraces the productive facilities which were transcendently important in the war we have just fought -- and which in all probability will be even more essential in any future conflict.

There can be no guns nor planes nor bombs without the plants to make them. We are today earmarking the facilities which would be necessary for war production if a conflict comes again -- facilities which would make the finished products, and those which would make the component parts of those products.

Some of these plants - for example, powder plants and arsenals -- we are retaining in Government ownership, because they are for special purposes and are usually of little or no value for any commercial enterprise.

Other plants we are turning over to industry, but are restricting the physical changes that can be made in them, and are making provision for the Government to utilize them in case an emergency arises.

But factories alone will not produce munitions or the supplies necessary for war. We must have the materials to go into the items which we manufacture. Some of these materials are normally in ample supply in America or can be readily produced from our own national resources. But there are others, such as rubber and tin, which must be acquired and held in sufficient quantities to enable us to arm and supply ourselves, if we should be cut off from foreign markets.

To meet this situation we have begun the accumulation of a national stockpile which, if our program is fully carried out, will within a few years provide us the scarce materials which we would need to fight a war.

MORE

Plants and stockpiles are under the jurisdiction of the Army and Navy Munitions Board. This Board is making other plans. It is considering available labor, available transportation. It is weighing exports and imports as they relate to national preparedness. It is setting up a general plan designed to go into immediate operation in the event we are faced with another military crisis -- a plan for producing the arms and equipment which would be necessary for such crisis.

And the armed services are assembling and conserving the military supplies which they now have on hand, selecting the best and most modern and discarding the deteriorated and the obsolete.

But we are not letting the possession of these arms lure us into a false sense of security. We recognize that in the development and improvement of weapons America must stay in the vanguard of progress.

It has been said axiomatically - "For a great nation, history never rests." We can look backward to glory, but we cannot build our future security upon the past.

Jet planes, with possible speeds exceeding that of sound -- bombers with ten thousand mile ranges -- aircraft flying without human pilots from Hawaii to our mainland -- these and other changes have within a year outmoded offensive and defensive weapons which were useful -- and were new -- in winning the recent World War.

With this in mind the research and development of the Army and the Navy proceeds jointly. More money, more men, are devoted to this work than ever before in the peacetime days of America or, we believe, of any other nation.

We are conserving and training and encouraging our scientists. We are importing them from other nations -- even from former enemy nations. We are bending every effort to stay more than abreast -- to stay ahead -- of the rest of the world in weapons of war.

The question may arise: Are we engaging in a competitive armament race which will grow and grow until all the world is bankrupt? We hope not. The race of research and development is not a race for quantity but a race for quality, which, though expensive, involves small amounts as compared with masses of weapons which are essential to a complete static armament.

And, parenthetically, research and development has a by-product of service to the peacetime needs of our people and of the world. Already we are talking about the civilian uses of atomic energy. And we are actually capitalizing on the transportation facilities of war-developed aircraft. We are even now utilizing in civilian life the medicines, the chemicals, the mechanical developments of the recent World War. And so it will be with future research and development in the nation.

MORE

But, peacetime use or no peacetime use, America must remain prepared in munitions—and in men. Some may feel that with the new weapons—the atomic bomb, guided missiles, jet planes—that little military manpower might be necessary in the next war. Unfortunately, we cannot believe this to be true.

History seems to prove otherwise. I am sure that, with the advent of gunpower, many thought that the day of the foot soldier was over. We can all remember that, when the long range bomber and the fighter plane came, it was thought that the ground forces might be minor parts of any fighting war.

But in World War II more men were engaged throughout the world—and more Americans by far—than in any war in history. And our Army had more than three times as many battle casualties as in all our other previous wars against foreign foes, including World War 1.

And—surprising as it may be to you—the battle deaths of the ground soldiers in this war were six times as great as the battle deaths of those who fought in the air.

We hope—and believe—that, despite these lessons of history, there will be reduction in military manpower. But there is no certainty how far this will go—even if the atomic bomb remains useable.

The exact number of men we will need for defense will be governed by future developments, but on the basis of experience, the War Department has planned for the foreseeable future an Army of 4½ million men, to be assembled and ready for service within one year from the date mobilization is begun.

And we have provided for a smaller initial force, designed to meet any first attacks which may come to our continent—no matter how sudden those attacks may be—and also designed to hold such lines in foreign lands as will prevent or defer an attempted attack upon America.

Both the initial force and the four million men will be in part Regular Army, in part National Guard, and in part Reserve Corps. The National Guard will have 27 Divisions and 27 Air Groups, which will be distributed throughout the country.

The organized Reserve will have an ultimate strength of 27 Divisions and 38 Air Groups. In peacetime, part of these will be fully organized, part will have a cadre of officers and non-commissioned officers, and the remainder will have a skeleton organization of officers only.

The size of the Regular Army as of July 1, 1947, has been fixed at one million seventy thousand men. Its ultimate size has not as yet been announced and will, of course, be in part dependent upon whether the universal military training program is adopted.

MORE

Men called under the military training program would not be a part of the peacetime Army—in fact would not be a part of a wartime Army except as they might later volunteer or enter under Selective Service. But the availability of trained young men who could enlist or be called in time of war would enable us with safety to reduce the number of peacetime soldiers.

Our plans, of course, provide for the equipment and supply of our Army in war and in peace. In the last war we had the best fed, the best paid, the best supplied, the best treated, and the most democratic army that this or any other nation has ever had.

But the War Department is still not satisfied. We are continuing to work—on the basis of experience—work to improve the condition of officers and enlisted men still further—to improve them as far as can be done without making them creampuff soldiers.

There is another phase of national defense which has been carefully planned—that of bases and installations for training and for defense—including air fields and supporting troops overseas—fields and troops which in the event of war may be able to keep all or most of an enemy from our shores.

These are our weapons and implements of national defense. And we must not disarm, in men or in weapons—must not disarm in whole or in part—until we know—not think, but know—that all other nations are doing the same thing at the same time.

We sank our ships after World War I—in a spirit of sweetness and light, which was not shared by other nations, who only pretended to carry out their part of the bargain. And we had to build other ships. We must not let this happen now—and we must not run the new and added risk of not having again the time within which to rearm.

We are faced with a similar problem now as to future use of the most terrifying of weapons, the atomic bomb. Our nation has made a proposal to ban the use of this weapon in modern warfare. The War Department, under whose guidance the bomb was developed, is just as anxious as anyone else—perhaps more anxious—that its use as an instrument of war should be abolished throughout the world—if we can be sure that the abolition by other nations is complete and in good faith.

But surely no sensible person feels—or can feel—that we can abandon the bomb or its use, or that we can cease to seek its improvement as a weapon, until we can be sure—absolutely sure—that other nations have permanently dispensed with the bomb and have completely ceased their efforts to develop it.

MORE

For the present we must be prepared, if America is attacked, or if an aggressor nation starts again on its creeping campaign of conquest—prepared to use every weapon—and I mean every weapon—which is at our disposal and which has not been outlawed by an international agreement which can be enforced.

What I have said—and the description I have given as to the preparation for war—sound, I am sure, most belligerent and war-like. It is not intended so to be.

The policy of our nation and of all its Departments is to use every reasonable and honorable means to preserve the peace for which we have fought so hard and sacrificed so greatly.

But we are convinced—from history and from the conditions existing today—that a weak America would be an invitation to aggressive war—and that a strong and peace-loving America will be the greatest deterrent to such a war.

Prophecies on nations, and on the relations between them, often prove wrong. But I am confident that, certainly for the immediate present, there is little likelihood of our nation becoming involved in an armed conflict, if—and only if—the whole world knows that we are determined and amply able to prevent any imposition upon our rights or those of our international associates, and that we are also able to defend ourselves against any aggressor.

I have spoken of men and of armaments and of research—and of the plans for all of them. I would mention one other requisite of a strong nation—the support of the people for their Army and Navy, and their Government as a whole, and the pride and confidence they have in them.

We are today in an era of public criticism of everything and everyone who participated in World War II. Our people are listening—and sometimes hearkening—to the Monday morning quarterbacks, who are now telling us how everything should have been done by the Army and Navy and everyone else.

But "Monday morning quarterbacks" is not a particularly good figure of speech, because in sports life it is only the losing team that has the benefit of the advice of hindsightists, while today it is the best winning team that this or any other nation has ever put on the field of battle that is receiving the expert advice of these free-wheeling, rear-looking counsellors.

Criticism is one of the prices which we must pay for democracy—for freedom of thought—freedom of expression—for the absence of despotic coercion of our lives and our conversations.

MORE

And criticism has its value, if it is constructive. No man, no State, no Nation, no army nor navy, can fully develop without knowledge of its past mistakes. Total lack of criticism or the point of view that the performances of America or any part of it during this war were perfect would be unhealthy—and would retard progress and development.

But some people like even destructive criticism. They like unsound generalities based on a few isolated cases. Or they prefer specific charges that are untrue, or that prove nothing if they are true. This class likes gossip or the spreading of gossip, particularly if it is sensational. They like it for political or publicity purposes—or just because it's gossip.

Even in a democracy that kind of criticism is a luxury and not a necessity. It is a luxury we cannot afford today in the unsettled world we find around us. It is too expensive. It costs us confidence in ourselves and in our nation. It costs us the respect of other nations, when wholesome respect or lack of it may mean the difference between peace and war.

No democratic nation can rise above the level of its people's wishes. If Americans want their nation to be militarily weak, it will be militarily weak. If they lose faith in their Government and their form of Government, neither will survive. Without the full support of the people of this Nation, the War Department or any other Department of Government cannot succeed in its undertakings.

In recent years we have seen a democratic nation fail, when its people lost faith in the nation and its leaders. It can happen again. And the answer lies only with the folks themselves.

There are countries in this world today that would delight if the people of the United States lost confidence in their Government. There are doubtless some within our own borders who would feel the say way. They would feel this way, because they know that there is no better method of destroying America and its democracy.

The American people have reached the stage when they must turn their faces largely to the future. We have heard the criticisms of the past. We know most of our proven defects. Now is the time to take that experience and knowledge, and capitalize on it—not moon and moan about it, but utilize it only for the future.

We can move forward only if we look forward. This applies to peacetime progress. And it applies to national defense.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, N, Speeches.

9/6/46

4:00 P.M.

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 2528 and 4860

September 24, 1946

IMMEDIATE RELEASE

ATOMIC LECTURES BEGIN AT FORT BELVOIR

A series of lectures and conferences of a non-technical nature designed to orient high-ranking Army officers with the implications of atomic energy as they apply to military operations and national defense opened yesterday at Fort Belvoir, Virginia, the War Department announced today.

Opening of the series yesterday was attended by approximately 80 officers chosen from service schools and other installations throughout the country. At the conclusion of the four-day course, they will represent the nucleus of a group which will disseminate information relative to the practical military aspects of atomic energy as applied to the Army in general.

The sessions, which will not be open to the press or public, will be addressed by Secretary of War Robert P. Patterson and authorities on nuclear energy including the following:

Lieutenant General C. P. Hall, Director of Organization and Training, War Department General Staff; Major General L. R. Groves, Commanding General, Manhattan Project; Colonel K. D. Nichols, Colonel S. V. Hasbrouck and Mr. W. E. Kelley of the Manhattan Project; Brigadier General Thomas F. Power, Colonel J. P. Cooney, Lieutenant General M. B. Ridgway, Colonel George R. Barker, and Captain F. L. Ashworth, USN.

The conference was opened by Major General W. M. Hoge, Commanding General of Fort Belvoir.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, Sc, N.
11:15 A.M.

FUTURE RELEASE
PLEASE NOTE DATE

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 3425 and 4860

F U T U R E   R E L E A S E

FOR RELEASE ON DELIVERY AT 12 NOON, PST, THURSDAY, OCTOBER 3, 1946

ADDRESS BY
LIEUTENANT GENERAL M. B. RIDGWAY, U.S.A.
AT THE AMERICAN LEGION MEETING, SAN FRANCISCO, CALIFORNIA
AT 12:00 NOON, PST, THURSDAY, OCTOBER 3, 1946

I am honored and glad to be here, and particularly gratified above all other considerations because of your indicated interest in the United Nations.

My remarks will be focused upon certain aspects of the relationship of the United Nations to the United States. These remarks derive largely from personal experience as General Eisenhower's representative on the Military Staff Committee of the United Nations, to which I have been assigned since its creation in London last February.

It is my hope to stimulate your thought, and what is of far more importance, to so present some salient facts that when you have given them your thoughtful consideration, you may translate your convictions into effective action helpful to this country and to the world.

Human activities with few exceptions reduce, under analysis, to some form of educative process. Eliminating the static and inert whose contribution to human progress is virtually negligible, all intelligent thinking beings offer their contribution in life through influence they exert in moulding the thought processes of others, in adding their individual increments which collectively constitute public opinion.

Writing in the July 27th issue of the magazine section of the New York Sunday Times, Allan Nevins, Professor of American History at Columbia University, discusses public opinion, and suggests classifying citizens into three very definite groups, the first comprising those "aggressive citizens who think only of selfish gain and strive to promote the interest of localities, industrial units and special classes"; a second "made up of those who realize clearly the dollar and cents implications of most legislation, but who study issues and problems carefully and who strive to take broad national views, insisting on a just national balance, without special privileges or special disabilities"; and the third "the unthinking mass". "The central task of democracy," states Professor Nevins, "is to educate as many of the unthinking as possible to a point where they will become members of the second group, and act with keen anxiety for the general welfare". It seems to me that never in their history have our citizens faced a greater need for sober examination of major national questions, nor a more urgent requirement for giving effect to the sober convictions to which their judgments may lead them. Beyond

MORE

any shadow of doubt, the time factor has never been so compelling.

I am going to speak first of the Military Staff Committee and the Security Council, and then of the Atomic Energy Commission, seeking to place before you a few brief facts concerning their functions and current activities, and secondly, to emphasize the implications to the United States of some of the major issues with which those agencies are now dealing.

I shall begin with the Security Council, whose present active United States member is our distinguished former Ambassador to Sweden, Herschel V. Johnson, and on which we shall later be represented by that eminent American statesman, Senator Warren R. Austin of Vermont. The member states of the United Nations have conferred on the Security Council "primary responsibility for the maintenance of international peace and security." They have expressed their determination to maintain peace and security throughout the world. They have implemented this determination to date by authorizing the Security Council under certain conditions to employ armed force to maintain peace. They have created a Military Staff Committee, comprising delegations of the Big Five and charged it with the responsibility for assisting the Security Council in making "plans for the application of armed force" and "to advise and assist the Security Council on all questions relating to the Security Council's military requirements for the maintenance of international peace and security".

If these plans and intentions were now in effective operation, the anxieties which beset our people and the world would be enormously reduced. Actually, not even the manner by which they may be put into operation has been agreed upon, and when that has been done, the machinery for doing it will have many tests to pass before it can even begin to function.

Perhaps some of you visualize the United Nations as a superstate, exercising world government and have been watching news reports for indications of the emergence of a permanent international police force. No such force is now in prospect and no world government exists. The present intention is to have the member states designate contingents of armed forces to be available on call by the Security Council in case it requires them to meet international emergencies.

The designation of these contingents, the de-limitation of their composition and overall strength, and the specification and provision for supporting facilities now engage our attention. The task involves several steps. The Security Council must conclude a series of agreements with members of the United Nations. These agreements must specify the forces or facilities each nation should hold available for use if called upon. Logically, such contributions would be in proportion to the military potential of each member. Some of the smaller nations may furnish no armed forces, confining their contributions to bases, rights of passage over their territory, and other necessary facilities.

Once these agreements have been signed, it will be the responsibility of the Military Staff Committee to make and recommend to the Security Council plans for the use of these United Nations Forces, and, under the Security Council, to exercise strategic direction of their operations.

MORE

It should be profitable here to examine the limitations on the use of such forces. They can not be used against any of the five permanent members of the United Nations Security Council, because any one of the five, China, France, Britain, America or Russia, could block such use by the exercise of its veto power, granted it by the Charter. The field of action by the United Nations armed forces, will, therefore, be strictly limited.

Simple and obvious as this fact is, I wish to do everything in my power to disabuse the minds of those Americans who harbor the utterly false notion which too many appear to embrace, that the United Nations is already firmly established as the guarantor of world peace and that we can now rely on it for our own security.

No belief could be more dangerously fallacious at this time. We believe this can be done in the future. We have pledged our utmost cooperation to accomplish it. We are devoting our unstinted time, energies and resources to bring about that accomplishment in the shortest possible time.

We have little patience with the cynic who holds that war is inevitable. We have even less with the person whether sincerely misguided or maliciously motivated who holds that war can not recur, who conceives of the United Nations as already an effective guarantor of world peace, who would counsel our people to relax for one moment from their defensive posture, or relinquish their capabilities for self-protection and national survival, until such time as reciprocal measures offering reasonable guarantees shall have come into effective international operation.

The lofty objectives of the United Nations and its severely restricted present capabilities must be recognized. It is the clear obligation of everyone here to make his full contribution to dispel from the minds of his brother Americans any misconceptions that tend to weaken the already none too strong security consciousness of the United States.

Membership in the United Nations, in itself a revolutionary step in American foreign policy, is a magnificent expression of the idealism of our people. But throughout our history, the American people have demonstrated that they possess another invaluable attribute in remarkable degree, and that is realism. We are firm followers of the Missouri habit of having to be shown.

It now seems appropriate to pass to the tasks of the United Nations Atomic Energy Commission, on which the U. S. is ably represented by its most eminent elder statesman, Bernard M. Baruch, assisted by a small advisory group of distinguished patriots.

This Commission, created by international action with the full approval of our Government, was instructed by the General Assembly of the United Nations to "proceed with the utmost dispatch and inquire into all phases of the problems of the control of atomic energy, and to make such recommendations from time to time with respect to them as it finds possible." In particular, the Commission is to "make specific proposals for effective safeguards, by way of inspection and other means, to protect complying states against the hazards of violations and evasions."

I earnestly commend to your attention the memorable address delivered by the Honorable Bernard M. Baruch to the opening session of the United Nations Atomic Energy Commission in New York on June 14 last.

In that now historic document the United States offers to entrust all phases of the development and use of atomic energy to an INTERNATIONAL authority to be created by treaty among all nations.

This time we want a different treaty - one with dependable proofs of good behavior and prompt condign punishments for bad. Millions of dead lie buried under broken treaties which relied soley upon promises.

We will agree by treaty to share our knowledge, to cease making atomic bombs, and to dispose of those in existence. BUT under two broad simple conditions. You must understand them, You must not misunderstand them.

The first is the progressive sharing of our unique knowledge by stages, each stage to be in demonstrated effective operation before the next is begun. To insure this we insist upon an international body clothed with full aurhority of access at all times to all sources of fissionable materials and production facilities. Without such free access there will be no confidence in the world that the treaty is being kept. No system relying upon purely national, as opposed to international exercise of the functions of inspection and supervision, and the imposition of punishments, would constitute any effective guarantee of compliance with troaty commitments.

The second is that there must be no veto to protect those who violate their solemn agreements not to develop or use atomic energy for destructive purposes.

The principle of the veto is intended to be an instrument for the protection of nations, not a shield behind which deception and criminal acts can be performed with impunity. This in no way impairs the doctrine of unanimity. No state need be an unwilling party to the treaty. But every state which freely and willingly becomes a party, by this act, solemnly and firmly ... binds itself to abide by its undertakings. Such undertakings would become illusory, if the guarantee against their breach resided solely in the conscience of the one who commits the breach.

Speaking of the veto power, Mr. Baruch was most emphatic: "I want to make very plain that I am concerned here with the veto power only as it effects this particular problem. There must be no veto to protect those who violate their solemn agreements not to develop or use atomic energy for destructive purposes."

In brief, the United States proposes no amendment to the United Nations Charter, no change in the veto power now vested in each Big Five representative on the Security Council. It proposes that the nations of the world recognize the indisputable fact that the control and development of atomic energy was neither considered nor dealt with in the framing of the Charter of the United Nations; that they shall not permit this circumstance to prevent bringing within the framework of the United Nations a matter of such vital concern to all; and that they will voluntarily enter into a new agreement by treaty providing for the formation of an international Atomic Development Authority.

MORE

Voluntary relinquishment of the veto on questions relating to a specific weapon previously outlawed by unanimous agreement because of its uniquely destructive character, in no wise involves any compromise of the principle of unanimity of action as applied to general problems, or to particular situations not foreseeable and therefore not susceptible of advance unanimous agreement.

The United States in June voiced the belief that no honest thinking people would have faith in a mere treaty to outlaw possession or use of the bomb, and that all honest thinking men and women will "demand a program not merely of pious utterances, but of world wide rights of inspection and enforceable sanctions." Since then, the constant deliberations and studies of those in charge of this vital work have brought two issues into sharp relief--international vs national jurisdiction over inspection and sanctions, and second, the veto. Both have been frequently discussed in the press, both will continue to receive the earnest efforts of all U. S. personnel concerned to find a solution. I have dwelt upon them at some length in the hope of making clearer to you gentlemen the incontrovertible facts and the overwhelming logic which support the U. S. proposals.

I have sought to clarify for you busy men and women of established integrity and proven patriotism, a few of the most basic, most vital, most perplexing problems, with which we or any other people have ever been confronted. I have sought and I seek to focus your attention upon not only their importance, but the great urgency of their importance. The time factor has dwindled in duration as it has increased in magnitude. The period of grace has shrunken. The time given to an unprepared selected victim by a potential agressor may in the future be measured not in years, not in months, but in days. I hope that word "unprepared" may strike every American brain with the impact of a blow.

We know only too well the enormous collective desire of our people for peace. We know its innate repugnance to war. We know that in its hatred of international violence, it builds up a tremendous inertia opposed to entry into armed conflict. We know that in the past only the impact of great forces over extended periods made the issue between right and wrong so clear that even the blind could read and so consolidated public opinion that inertia was overcome and the nation put into motion. The impact of Pearl Harbor still reverberates in the brains of thinking men and those same men recall the humiliating travail of this nation through the many months we still required before we were capable of expressing our righteous wrath in major offensive action.

This is a different epoch. The tide floods on.

We emerged from a great war, strong in our pride and free. Forces of this nation, armed and unarmed, abroad and at home, achieved this result by their united and mighty efforts. It was teamwork on the greatest American scale.

Today that teamwork is menaced, in part by factors inherent in democracy, in part by the exploitation by hostile elements of our freedom of the press to confuse the issues, divide our counsels, and destroy the team.

The work in which we are now engaged on the United Nations, including the Atomic Energy Commission, demands incomparably the greatest united team effort that this nation in peace has ever been asked to exert. It calls for the best

MORE

each of us can contribute, not only in individual effort, but in the education of those who by faulty reasoning or for other causes do not see the issues as they are. It calls for painstaking analysis to detect the specious and hostile in the arguments in press and radio. It calls for self-dedication to the task of education in things American. It calls for selfless devotion to the task of destroying in this nation things un-American.

If we learned one lesson concerning the employment of armed forces in the colossal venture just finished, it was the necessity for balanced forces of air, ground and sea contingents each trained in its rightful and indispensable role. Yet there are in this nation today, apart from those openly hostile to us, sections of opinion, in part motivated by sincere conviction and in part by selfish aims, which at times advocate extreme unbalance of our armed forces, which seek the enlargement of one arm at the expense of severe impairment of another, which seek so large a proportion of our peace time defense budget for one as to gravely curtail the amounts available to the others. This is but one of our major national porblems, but it is a vital one, a difficult one, and one calling for the best every American can contribute in vision, judgment, integrity and courage.

Many, but not all of you, have seen war at work. You know its past devastation. You can imagine its possible future horrors. The American people by and large have neither seen the one, nor visualize the other. It is up to us to educate them to face the issues and to adopt the measures which will insure that neither they nor their children's children will ever know what those horrors can be, neither abroad nor in this land we so dearly love.

My faith is unshakable that we can do it.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, N, Sc, Speeches
9-24-46
10:00 A.M.

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 2528 and 4860

October 7, 1946

MEMORANDUM FOR THE PRESS:

In response to queries to the War Department The Secretary of War announced today that there is no truth whatsoever in the stories that the United States has shipped or is shipping atomic bombs to Great Britain.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, Sc, N.
12:20 PM

FUTURE RELEASE
PLEASE NOTE DATE

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 2528 and 4860

F U T U R E   R E L E A S E

FOR RELEASE UPON DELIVERY

REMARKS BY
MAJOR GENERAL LESLIE R. GROVES, COMMANDING GENERAL,
MANHATTAN PROJECT, BEFORE THE NATIONAL SAFETY CONGRESS,
STEVENS HOTEL, CHICAGO, WEDNESDAY, OCTOBER 9, 1946,
AT 9:30 P.M., CST (10:30 P.M., EST)

(General Groves will be preceded by Mr. Theodore Smith, Chairman, Board of Trustees, National Safety Council, who will present safety award to Manhattan Project)

ATOMIC ENERGY -- A NEW SAFETY PROBLEM

All of the people who contributed to the development of the atomic bomb, and all of those who are now working in the Manhattan Project, are honored by this recognition of their achievement in working safely.

I accept this award on behalf of tens of thousands of loyal Americans who recognize that it is their duty to their country, their families, and themselves, to work safely as well as efficiently in the Nation's most important undertaking.

This Award is accepted on behalf of the safety pioneers of the atomic age. There are nearly 100,000 of them, most of them young. They are the pioneers of the atomic energy industry, and of atomic energy safety. They are scientists, engineers, skilled and unskilled workers, and industrialists. They make up the Manhattan Project. I am honored in appearing here for them.

The effectiveness of their work is proven by the results. Throughout the life of the Manhattan Project, we have had about seven accidents for every million man-hours worked or about half the national average of industrial accident during the war years.

The frequency rate of seven accidents per million manhours worked covers the period from the formation of the Manhattan Engineer District in the fall of 1942 to June 30 of this year. We have shown a continuous reduction in accidents, from almost nine per million man-hours in 1943 to about six in 1945. We are still improving. The rate for the first six months of 1946 is less than four accidents per million man-hours.

This safety record proves that our very large plants for the production of fissionable materials can be and have been operated safely. The question in the minds of the American and all other peace loving people of the world is how can

MORE

we safely make use of the great though undefined potential in this new field of man's activity. Perhaps the answer depends upon whether the nations of the world work as hard at preventing the misuse of atomic energy as we did in preventing accidents in building and operating atomic energy plants. They should be willing to work much harder, for the rewards are so much greater.

It is appropriate that you as the leaders in safety work should consider atomic energy, not only because it adds a whole new field of safety work, but also because as citizens of the United States and as men of humane motives, you recognize the very safety of civilization is at stake.

Your job is to prevent accidents. Accidents are pure waste in both human and economic values. The Safety Council has been highly effective in reducing this waste.

War is like an accident in that it is wasteful in terms of both human and economic values. A future war, in which not only the atomic bomb but many other terrible weapons of mass destruction will be used, will be immeasurably more wasteful. War may be further likened to an accident in that we believe it is preventable, if we make the effort. We need an organization to work on the job of preventing an atomic war. Such an organization -- an International Safety Council -- is envisioned in the proposed international control body for atomic energy.

I said war is like an accident. We recognize, of course, modern war is not an accident. It has been, and any future war will be, the purposeful act of an aggressor who calculates his risks, then strikes if his chances of winning appear good. But what difference does it make to you, as a father, if your son is killed by an atomic bomb, or in an automobile wreck. The result, as far as you are concerned, is the same.

That is why we may speak of the control of atomic weapons, and all other weapons of mass destruction, in terms of a safety problem. We are justified in trying to apply accident prevention techniques to war prevention.

You organized this safety council because you learned a lesson from the cost of accidents in money and in human happiness. The peace loving people of the world have learned a lesson, a searing and unforgetable lesson, from the last two world wars. It is not necessary for me to remind you of the horrors and the short and long costs of World Wars I and II, but I believe you will understand what I mean when I say the way to win wars is to avoid them.

The time has come, because atomic bombs makes war so much more costly than ever before, to do something about preventing it.

You have a good formula for preventing automobile accidents. It is "Engineering, Education, and Enforcement."

The same principles can be effectively applied to atomic energy control. The plan for the control of atomic energy which was presented to the United Nations Atomic Energy Commission by Mr. Bernard Baruch, employs these principles of "Engineering, Education, and Enforcement."

MORE

The Government of the United States proposes an international organization with complete authority over atomic energy, with the scientists, the engineers, and the production facilities to develop this field for the good of mankind. This is the Engineering.

This international authority would have responsibility for the advancement of knowledge in the field of atomic energy and for its dissemination to the people of the world. It would know all there is to know about the destructive uses of atomic energy, and on the basis of this knowledge, develop and establish the safeguards against any preparation for an atomic war. This is the Education.

An finally, an international control plan must be able to control effectively the uses to which fissionable materials are put, to see that all parties to the contract carry out their obligations fully. This will be the most difficult part of the program to work out, but without it -- the Enforcement phase -- will find Engineering and Education are impotent.

All of the people of the world must realize the imperative need for adequate international control of atomic energy. We can attain effective controls only on the basis of understanding and confidence among nations, coupled with and supplemented by positive safeguards against the misuse of atomic energy.

The safeguards which are proposed in the plan submitted on behalf of the United States Government are positive -- they are the very machinery for accomplishing the objectives of the contract.

It is a contract in which the risks are minimized by the major protective features of the Baruch proposals, which would create an international atomic development authority. Its duties would be:

1. To control raw materials.

2. To control all atomic energy activities potentially dangerous to world peace.

3. To inspect, control and license all other atomic energy activities.

4. To carry on research and development activities of an affirmative nature -- to give the authority the great power that is inherent in possession of leadership in knowledge.

The plan is nothing more, nor less, than a contract among the United Nations. As in the contracts we make every day for business purposes, there are risks, but the risks are known and should not deter us.

I say the risk of living without this contract is greater than the risk of living by it.

The Baruch plan calls for the renunciation of the bomb as a weapon of war, and establishes the standards by which compliance with the contract may be measured. The following acts are to be stigmatized as international crimes:

MORE

1. Illegal possession or use of an atomic bomb.

2. Illegal possession or separation of atomic materials suitable for use in an atomic bomb.

3. Seizure of any plant or other property belonging to or licensed by the authority.

4. Willful interference with the activities of the authority.

5. Creation or operation of dangerous projects in a manner contrary to, or in the absence of, a license granted by the international control body.

With the safeguards, the renunciation of the bomb, and the definition of violations, the American proposal is a forceful, realistic, and workable solution to the problem of the atomic bomb.

A plan which does not incorporate these provisions is a weak plan and would be worse than none because it would give the people of the signatory nations a false sense of security, and would make unlawful use of the bomb more profitable by the margin of confidence placed in the plan by the nations which refrain from such unlawful use.

One of the things you must keep uppermost in your minds is the fact that this bomb is by far the most devastating anddestructive weapon ever developed. It has not been over-rated. There is no real defense against atomic bomb attack, except enforceable and enforced agreements not to have any bombs extant in the world. Any other attempt at protection, by dispersion or by attempts to destroy the bombs before their arrival near the target, would necessarily revolutionize our political, social, and industrial life -- and in a fashion not pleasant to contemplate.

I tell you there is no more important question facing the American people and the people of the world today than that of control of atomic weapons and other weapons of mass destruction. There is no sounder plan for this control than the one advanced by the Government of the United States and contained in the address with which Mr. Baruch opened the sessions of the United Nations Commission on Atomic Energy. In the words of Mr. Baruch, it was advanced as "the basis for beginning our discussion". I am sure he will agree it is open not only to discussion, but also to amendment and modification provided they result in improvements in the proposed measures to control atomic energy. I urge every thinking American, and every other citizen of the world who is interested in the maintenance of world peace, to read and reread Mr. Baruch's historic address.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, N.
10-8-46
10:30 A.M.

FUTURE RELEASE **PLEASE NOTE DATE**

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. RE 6700
Brs. 2528 and 4860

F U T U R E R E L E A S E

FOR RELEASE FRIDAY P.M., OCTOBER 25, 1946

GENERAL GROVES URGES DECEMBER 2
AS 'BIRTHDAY' OF ATOMIC ENERGY

The "significant anniversary" which should be observed in connection with the United States program of development of atomic energy is December 2, according to Major General L. R. Groves, Commanding General of the Manhattan Project.

It was December 2, 1942, when the first successful nuclear reactor was made to work. It was built under the West Stands of Stagg Field at Chicago by a group of scientists working under Dr. A. H. Compton at the Manhattan Project's Metallurgical Laboratory.

General Groves announced today that the Army's atomic energy organization would observe that day as the anniversary of an event "which was a milestone in the advancement of science."

The establishment of December 2 as the "birthday" of the atomic age was suggested by Scientists on the staff of the Argonne National Laboratory, successor to the "Met Lab," at Chicago, said General Groves, who then passed the suggestion to other installations of the far-flung atomic energy program.

In a message to all Manhattan Project personnel, General Groves said;

"It is appropriate that we in the Manhattan Project should take note of the anniversary, which I hope will be remembered in the years to come, of a most significant event in the development of atomic energy. This day of utmost importance was December 2, 1942, when the first successful nuclear chain reactor was operated.

"That was the day on which man first demonstrated that not only could he release the energy of the atom but he could control it.

"I believe the scientists, the engineers, the industrialists, the technicians, the workers, and the Army personnel who have given so much to the Manhattan Project during the past four-and-a-half years will agree that December 2 is a day to be remembered.

MORE

"In observing this anniversary, we pay tribute to the spirit and teamwork of the American people, recognizing the accomplishments by the combination of science, engineering, industry, labor, government, and the armed services.

"The December 2 experiment was of vital importance in a program which was a triumph of engineering, science, and management. We know that other days were important too, but new ideas, new inventions, new discoveries, and fresh demonstrations of American ingenuity came so fast that no other single day stands out.

"The Argonne National Laboratory and its 25 participating universities are sponsoring a special meeting of their representatives in Chicago on December 2, this year, the fourth anniversary of the first self-sustaining pile. I am in full accord with their suggestion that December 2 be observed as the significant anniversary."

END

DISTRIBUTION: Aa, Af, B, D (except Do), Ma, N, Sc.
10-24-46
3:30 P.M.

WAR DEPARTMENT
HEADQUARTERS, MANHATTAN PROJECT
WASHINGTON

28 October 1946
WD Exts. 76102, 76082

Statement of Major General L. R. Groves, Commanding General, Manhattan Project, for release upon announcement by The White House of the appointment of the United States Atomic Energy Commission.

The appointment of the Atomic Energy Commission is an important step in the long range program of the American people, whose purpose is to establish atomic energy on a foundation which will permit the maximum utilization of its peacetime potential and control of its war potential.

The United States led the way in the development of the atomic bomb and it must lead the way in the twin program of peacetime development and domestic policy meshing with the effective international control measures proposed by President Truman and Mr. Baruch. I am sorry President Roosevelt did not live to witness the realization of his vision that an atomic bomb would shorten the war and by increasing man's knowledge make America a better place in which to live. President Truman has carried on with the same interest and foresight to bring about this realization of the hopes of the American people.

In assuming control of the Manhattan Project, the new Commission takes over an organization of thousands of faithful employees, eager to continue work with the same integrity and industry which has characterized their service in the development of the bomb. The commissioners will also find the industrial operators and contractors energetic, progressive, and highly qualified.

I know the Atomic Energy Commission will receive the same invaluable help we did from the Bush's, Conants, Tolmans, Lawrences, Bethes, Oppenheimers, Wigners, Fermis, and the Comptons of the present and future years. These are but a few names from the long roster of great scientists who risked their scientific careers and established reputations on the greatest calculated risk proposition ever undertaken. These men of great scientific stature have not lost interest in our work but have continued wholeheartedly since V-J Day to give of their talents and their energies that the people of the United States might realize the greatest good from their wartime success.

The Manhattan Project is a going concern. Substantial progress has been made during the last year along the road of peacetime developments. Programs for broad participation in research have been established. And, in compliance with Presidential directive, the security of the project has been maintained, insofar as has been possible.

We have assured Secretary Patterson and the President that we are prepared to take whatever steps the Commission may desire us to take in accomplishing the transfer. And I have assured Chairman Lilienthal that we are ready and eager to cooperate in every possible way to expedite the changeover to the new authority and to assist the Commission in getting started on its big job.

The Atomic Energy Commission deserves and needs the confidence and the full support of the American people. The commissioners are honored by the trust which has been placed in them.

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. - RE 6700
Brs. 2528 and 4860

MEMORANDUM TO THE PRESS: October 28, 1946

STATEMENT OF THE SECRETARY OF WAR:

The appointment by President Truman of the Atomic Energy Commission brings to a close a period of unique responsibility for the United States Army.

The accomplishments of the Manhattan Project in the advancement of nuclear research, the design and construction of facilities, and in the development of a weapon which shortened the war, form a record of achievement unparalleled in the history of this nation or any other.

Under the guidance of Major General L. R. Groves, the combined scientific and industrial strength of America wrought a weapon of war which has revolutionized warfare. At the same time, it opened new fields of knowledge so vast that full control of its development was taken by the Government of the United States.

The Army, after directing the program of development of atomic energy, remained for more than a year in a position of trusteeship for the property of the American people. It has managed the atomic energy facilities in such a way as to establish on a sound foundation this new industry, created for war but holding unexplored promise for peace.

The Army is turning over to the new Commission a vast and complex organization, including physical facilities with an installed value comparable to the total assets of the nation's largest business organizations. I have assured President Truman that the transfer to the new authority will be carried out expeditiously.

I can assure Chairman Lilienthal that the War Department will cooperate to the fullest possible extent to assist the Commission in taking over its new responsibilities.

END

DISTRIBUTION: N, Y.

FUTURE RELEASE

PLEASE NOTE DATE

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. RE 6700.
Brs. 2528 and 4860

FOR RELEASE WEDNESDAY A.M., OCTOBER 30, 1946

CALENDAR

OF IMPORTANT EVENTS

IN THE DEVELOPMENT OF ATOMIC ENERGY

1938 to 1946

Background information for use at any time in connection with observance of December 2 as significant anniversary of atomic energy.

JANUARY 1939	Confirmation and interpretation in U.S. of discover of fission of Uranium abroad in November 1938. Implications: the release of energy, the production of radioactive atomic species, and the possibility of a neutron chain reaction.
OCTOBER 11, 1939	President Roosevelt apprised of potentialities of uranium fission. Appoints "Advisory Committee on Uranium."
FEBRUARY 1940	First transfer of funds from Army and Navy to Advisory Committee on Uranium.
APRIL 1940	American scientists propose voluntary censorship on atomic matters.
JUNE 1940	Advisory Committee on Uranium placed under National Defense Research Council.
MAY 1941	E. O. Lawrence, CIT, reports plutonium (discovere late in 1940) is formed by neutron capture and two successive changes in atomic structure of uranium 238, and that plutonium undergoes fission.
JULY 1941	First graphite and uranium lattice structure set up at Columbia University to study neutron emission.
NOVEMBER 1941	Review Committee reports favorably on possibility of an atomic bomb of great strength. Estimates between three and four years needed to produce a bomb. Dr. Vannevar Bush and associates decide that possibilities of the atomic bomb justify greater effort and that the existing NDRC set-up was not equipped to handle such a program. Therefore responsibility was transferred to the Office of Scientific Research and Development.
DECEMBER 1941	Top Policy Group recommends further fundamental research and engineering planning of pilot plants; also that the Army should be brought in when full scale construction was ready to start. Dr. Conant, following recommendations of the Top Policy Group, emphasizes that an all out effort at this time was justified by the military value of atomic bombs and that all efforts must be concentrated in this direction.

MORE

JANUARY 1942	Columbia and Princeton groups moved to University of Chicago; Lawrence continues electromagnetic methods study at CIT; research on gaseous diffusion method continues at Columbia; centrifuge work continues at University of Virginia and Standard Oil Development Laboratory in Bayway, New Jersey; Navy continues research on thermal diffusion method
JUNE 13, 1942	Bush and Conant send a report to Top Policy Group stressing that there were four equally promising methods of separating the U-235 from U-238, that graphite uranium and heavy water uranium pile methods of producing plutonium seemed likely to succeed that production plants for all methods should be started, and that the Army should be brought in to the project. President Roosevelt initialed and approved this report on June 17, 1942.
JUNE 18, 1942	Colonel J. C. Marshall, Corps of Engineers, instructed to form a new district in the Corps of Engineers labeled for security purposes the DSM Project (Development of Substitute Materials).
AUGUST 13, 1942	The Manhattan District officially established and designated.
SEPTEMBER 17, 1942	Major General (then Brigadier General) Leslie R. Groves placed in charge of all Army activities relating to the DSM Project.
SEPTEMBER 23, 1942	A Military Policy Committee named, consisting of Dr. Bush, Dr. Conant, General Styer, Admiral Purnell and with General Groves as executive officer in charge of the work.
SEPTEMBER 1942	Oak Ridge selected as site for Clinton Engineer Works.
NOVEMBER 1942	Site selected for bomb development--Los Alamos, New Mexico.
DECEMBER 2, 1942	First nuclear chain reacting pile at the Metallurgical Laboratory at the University of Chicago. (Date suggested by General Groves as significant anniversary to be observed in connection with United States Atomic Energy Development.)

MORE

DECEMBER 1942	Hanford, Washington, selected as site for new facilities for plutonium production.
MAY 1943	Manhattan District takes over all remaining research and development contracts from OSRD.
OCTOBER 1943	U-235 separation by electromagnetic process starts.
NOVEMBER 1943	Pile at Clinton operating.
JANUARY 1944	Experimental amounts of U-235 from electromagnetic process shipped to Los Alamos. First shipments of usable amounts made in March 1944.
MARCH 1944	By this time several grams of plutonium had been delivered by Clinton.
SEPTEMBER 1944	First pile at Hanford operating.
JULY 16, 1945	First Atomic Explosion, Alamogordo, New Mexico.
JULY 26, 1945	Potsdam Surrender Ultimatum to Japan.
JULY 29, 1945	Japan rejects Potsdam Ultimatum.
AUGUST 6, 1945	Hiroshima, Japan, bombed.
AUGUST 9, 1945	Nagasaki, Japan, bombed.
AUGUST 14, 1945	Japan offers to surrender.
OCTOBER 3, 1945	President Truman asks Congress for domestic control legislation.
OCTOBER 29, 1945	Establishment of the Senate Special Committee on Atomic Energy under Senate Resolution 179.
NOVEMBER 15, 1945	Agreed Declaration on Atomic Energy by President of the United States, Prime Minister of the United Kingdom, and the Prime Minister of Canada.
NOVEMBER 27, 1945	Hearing before the Senate Special Committee on Atomic Energy begins; continues until April 8, 1946.
DECEMBER 27, 1945	Moscow Agreement announced.

MORE

FUTURE RELEASE **PLEASE NOTE DATE**

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. RE 6700
Brs. 2528 and 4860

FOR RELEASE IN P.M. PAPERS, THURSDAY, NOVEMBER 7, 1946

PROGRESS MADE IN DECLASSIFICATION OF ATOMIC ENERGY INFORMATION

The pipelines of scientific information, once drained of all reference to atomic energy to preserve the secrecy of the atomic bomb, are beginning to fill with data in the field of nuclear science -- "without impairing the essential security surrounding the bomb."

Passed through the filtering process of declassification, the knowledge gained in nearly five years of atomic research and development is beginning to flow -- both in scientific and technical channels and in the public press.

Nearly 500 papers, totalling some 2,000,000 words of atomic information, have been cleared through the Manhattan Project's declassification procedure, according to an article in the December 5 issue of the Chicago Bulletin of the Atomic Scientists by Leiutenant Colonel W. S. Hutchinson, Jr., Declassification Officer for the Army's atomic development agency.

"Specific evidence of the effectiveness of the declassification policy," said Colonel Hutchinson, "was given at the June meeting of the American Physical Society and the September meeting of the American Chemical Society in Chicago. Of the 101 papers presented at the Physical Society meeting, 46 dealt with material developed on the project and had been cleared by the Manhattan Project Declassification organization.

"Included in the American Chemical Society program was a two-and-a-half day symposium on fluorine and fluorocarbon chemistry, heralding the birth of a completely new branch of the domestic chemical industry. This represents a significant contribution to science and was accomplished without danger to national security."

In connection with the article appearing in the Bulletin of the Atomic Scientists, it was reported by the Manhattan Project that nearly half of the papers declassified are being published.

Many of the unpublished as well as the published articles will appear in the Manhattan Project's own technical history started in 1945. This will be a library of more than 100 volumes bringing together in one set of books all of the significant scientific and engineering information developed in the atomic energy program.

MORE

Arrangements have been made with the Department of Commerce for the publication and distribution of a number of these papers. They are listed in the Department's Bibliography of Scientific and Industrial Reports. Although government funds are not available for printing, the papers are for sale as photostats or on microfilm at the Office of Technical Services of the Department of Commerce.

"American Science is best served by the widest possible dissemination of Scientific information without restriction," said Colonel Hutchinsin but "national security is best served by controlling certain scientific developments in the nuclear field as they relate to the atomic bomb."

"The Manhattan Project has established a very effective program which protects the vital secrets of nuclear science affecting National security and which still releases the basic mathematics, chemistry and physics developed on the Project during the war. One purpose of this policy is to give the impetus to American Science to continue its advance, not only in government sponsored and government-controlled laboratories, but also in the many independent academic and industrial organizations that are the foundation of our national scientific, engineering, and industrial strength."

The first application of this policy was the release of the Smyth Report (Atomic Energy for Military Purposes, H. D. Smyth) shortly after the announcement of the bombing of Hiroshima, according to the article. In the Smyth report a general survey of the major fundamental developments was presented to American scientists while the detailed information which concerns national security was retained.

General L. R. Groves, chief of the Manhattan Project established the present declassification policies in the spring this year. These policies were based on the recommendations of a committee headed by Dr. Richard C. Tolman, Dean of the graduate school, California Institute of Technology and now chief scientific advisor to Mr. Bernard Baruch, was the chairman. Colonel John R. Ruhoff of the Manhattan District was the non-voting secretary. Dr. R. F. Bacher, Dr. A. H. Compton, Dr. E. O. Lawrence, Dr. J. R. Oppenheimer, Dr. F. G. Spedding, and Dr. H. C. Urey comprised the committee. The purpose was to recommend the adoption of a detailed procedure to accomplish the general mission of releasing scientific information to further the national welfare where this can be done without danger to the National Security.

This report recommended the establishment of a declassification organization project - wide in scope and manned by the very civilian scientist who have been personally concerned with developing the information that was to be presented for release. Declassification was to be accomplished by document rather than by broad fields of science.

MORE

Each release had to be written up and reviewed in detail, first by the head of the organization in which the information was developed, then by a competent scientist in the particular subject concerned, and finally by the Manhattan District Declassification and Publications Office at Oak Ridge to check for any possible oversight and to provide general administration for the organization as a whole.

"The present Manhattan Project declassification organization began to operate along these lines in April 1946. With a few modifications it is now doing a flourishing business and had declassified nearly five hundred scientific and technical documents by the end of September without releasing any information that endangered the National security.

"The Declassification Guide provides in general for the release of basic scientific information which bears no direct relation to the problems that a foreign nation would have in making an atomic bomb of its own.

"Despite the carefully repeated checks that are made on each document the system operates quite rapidly on papers that are clearly in the releasable category and which are submitted in accordance with the directions in the Manual for the Declassification of Scientific and Technical Matters. A prominent scientist at the June Physical Society meeting said that it was remarkable that not a single paper that was submitted for declassification and presentation at this meeting had to be withheld from presentation because of administrative failure of the Declassification Office at Oak Ridge. Normally a document can be processed within two weeks from the day that it leaves the Coordinating Organization Director's office.

END

DISTRIBUTION: Aa, Af, B, D, Dd, Dm, G, K, L, N, Sc.
11-6-46
11:45 A.M.

FUTURE RELEASE **PLEASE NOTE DATE**

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. RE 6700
Brs. 2528 and 4860

FOR RELEASE SUNDAY, NOVEMBER 10, 1946

ATOMIC LABORATORY TO BE BUILT AT SCHENECTADY, NEW YORK

The War Department today announced plans for the establishment of a $20,000,000 nuclear research laboratory near Schenectady, New York, for the study of power generation from atomic energy.

Major General L. R. Groves, Chief of the Manhattan Project, stated that the General Electric Company, under a contract made several months ago, would operate the nuclear power research center and is serving as the prime contractor for design and construction.

"Named The Knolls Atomic Power Laboratory, this will be the fourth in the network of laboratories established by the Manhattan Project to further nuclear research," said General Groves. "The work on this program began many months ago and will be transferred to the Atomic Energy Commission as a part of the broad peacetime development program.

"The Clinton Laboratory at Oak Ridge and the Argonne National Laboratory at Chicago are already carrying out broad research programs, with both educational institutions and industrial organizations participating. Work has been started on the Brookhaven National Laboratory on Long Island, which will be operated by a corporation formed by nine of the major eastern universities.

"Research work in all phases of atomic power development will be carried on in the Knolls Atomic Power Laboratory. In addition research on specific problems in connection with the operation of Hanford Engineer Works, operated by General Electric's Chemical Department will be carried out in the new facility."

Land for the Knolls Atomic Power Laboratory will be provided by General Electric Company adjoining the site of the huge new General Electric Research Laboratory now under construction where the company's fundamental research in other fields will be concentrated. Although the two laboratories will be operated together, the Government-sponsored Atomic Power Laboratory will be separate from the General Electric Research Laboratory.

MORE

Dr. C. G. Suits, Vice President and Director of Research for GE, will have general supervision of the nuclear study program. Responsibility for the atomic power pile project, which is the principal activity of the new government sponsored laboratory, has been assigned to Dr. Kenneth H. Kingdon, Senior General Electric physicist who with Dr. Pollock was one of the first physicists to work on the isolation of Uranium 235. Dr. Kingdon has been with the General Electric Research Laboratory since 1920 where his chief work has been on electron emission, radio tubes, thyratrons, and in recent years on nuclear research. He worked at Berkeley with Dr. E. O. Lawrence in the development of the Electro-Magnetic Plant for separation of uranium 235. During both World War I and World War II Dr. Kingdon made large contributions in the anti-submarine field.

"Basic nuclear reactions and the theory of uranium fission are in the field of physics," said Dr. Kingdon, "but the detailed study of the problems of construction of an atomic power reactor for power production involves major contributions from chemistry, chemical engineering, metallurgy, electrical and mechanical engineering.

"For this reason, scientists specializing in these fields will compose a considerable proportion of the group working on the new program. In addition, the resources of the many engineering divisions of the General Electric Company will be employed on the project. The General Engineering and Consulting Laboratory under vice president D. C. Prince will undertake an extensive engineering activity on atomic power plants. This work is being coordinated with the research program by Mr. C. W. LaPierre."

Dr. Suits announced that a number of scientists who played important roles in the earlier work of the Manhattan Project have been retained by General Electric as consultants for this work. Among these are: Dr. Hans A. Bethe, Cornell University; Dr. Glenn Seaborg, University of California; Dr. E. O. Lawrence, University of California; Dr. W. Zinn, Argonne National Laboratory; Dr. Warren K. Lewis, Massachusetts Institute of Technology; and Dr. Eugene P. Wigner, Research Director, Clinton Laboratories, on leave from Princeton University.

In addition to chemical, physical, metallurgical, and chemical engineering laboratories, special facilities are planned in the new Atomic Power Laboratory. Among these are a uranium reactor for the experimental production of atomic power, powerful atom smashers, and a "hot" chemistry laboratory, where the reactions involving radiation from radioactive materials may be studied.

Dr. Suits reports that about 450 scientists and some 1600 technicians will be required when the combined activities of the two laboratories are in full operation.

MORE

A number of scientists from other laboratories of the Manhattan Engineer District have already joined the General Electric staff, and additional physicists, chemists, metallurgists and engineers will be added to the project in the immediate future.

As part of the nuclear research program a branch of the company's research laboratory has been established at Richland, Washington in the Hanford Engineer Works of the Manhattan Project. Dr. W. D. Coolidge, formerly director of the General Electric Research Laboratory has taken charge of this laboratory at Richland.

Administration of the contract with the General Electric Company and coordination of the work at the Knolls Atomic Power Laboratory with other Manhattan Project work will be accomplished by the Schenectady Area of the Manhattan District. Mr. L. E. Johnston, who has been with the Corps of Engineers since 1934 and was a wartime officer with the Manhattan Project has been appointed Area Engineer.

END

DISTRIBUTION: Aa, Af, B, D, Da, Dd, Dm, G, K, L, N, Sc.
11-6-46 11:45 A.M.

FOR IMMEDIATE RELEASE

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON 25, D. C.

INFORMATION FOR THE PRESS:
No. 2, 12 November 1946
Tel. RE 6700; Exts. 76102, 76082.

The five-man United States Atomic Energy Commission left Washington at 4 p.m. today by air for Knoxville, Tenn., on the first leg of a tour of the principal atomic energy facilities.

They will spend Wednesday and Thursday at Oak Ridge, Tenn., primary installation of the Army's Manhattan Project, where the first formal meeting of the Commission will be held. From there they will go to Los Alamos, N. M., visiting the bomb laboratory, thence to Berkeley, Cal., to inspect facilities of the Radiation Laboratory at the University of California. The Commissioners will also visit Hanford Engineer Works, Pasco, Wash., returning to Washington about November 21 with a probable stopover at the Argonne National Laboratory, Chicago

The inspection tour is a part of the Commission's broad study of problems related to the transfer of the properties to Commission control, and in preparation for the full assumption of operating responsibility. Temporary office space for the Commission has been provided in the New War Department Building, 21st Street and Virginia Avenue, Washington, until permanent quarters are available.

Members of the Commission making the tour are: Chairman David E. Lilienthal, Dr. R. F. Bacher, Sumner T. Pike, Lewis L. Strauss and W. W. Waymack. They will be accompanied throughout the trip by Col. K. D. Nichols, District Engineer, Manhattan Engineer District, and deputy to Major General L.R. Groves.

END

DISTRIBUTION: N, Y.
11-12-46 4:00 P.M.

FOR RELEASE IN A.M. PAPERS FRIDAY NOVEMBER 22, 1946

DEVELOPMENT OF ATOMIC POWER NO SIMPLE PROBLEM

The complexities of the problem of generating electric power from atomic energy are indicated in a review published today of the status of the nuclear power development program of the Manhattan Project.

The organization and general research program for the utilization of nuclear energy for the generation of electric power was outlined in a non-technical report released, according to Major General L. R. Groves, Chief of the Manhattan Project, "to provide a basis for better understanding of the problems involved."

"This is not a report as we normally use the term," said General Groves. "It is merely a review of the background information, outlining the problems which confront the scientists and engineers working on this phase of our broad program. It indicates that progress is being made."

"We have no headline-making accomplishments to report, but the Manhattan Project is carrying out an intensive research and development program. We are employing techniques of management developed during the war period, coordinating and concurrently pushing the scientific, engineering and operating planning of the work. I hope this information will be useful in providing a basis for a better understanding of the problems involved."

The status of the power project was described as follows:

Two prime contracts have been awarded for the development of power, one to Monsanto Chemical Company of St. Louis, and one to the General Electric Company.

Monsanto Chemical Company, which operates the Clinton Laboratories at Oak Ridge, Tennessee, for the Government, is working on a power pile based on preliminary designs and suggestions of Dr. Farrington Daniels, Professor of chemistry at the University of Wisconsin and Chairman of the Board of Trustees of the Argonne National Laboratory, Chicago. Dr. Daniels is serving as a consultant to the Clinton Laboratories Power Pile Division which is headed

MORE

by Dr. C. Rogers McCullough. The research and development program at Clinton Laboratories is under the supervision of Dr. E. P. Wigner. When the design has been prepared it is contemplated that an experimental plant will be built at Oak Ridge.

Studies of power piles were begun by Dr. Daniels in 1944. The feasibility of the proposed pile was established shortly thereafter by theoretical calculations made by Dr. Daniels and his associates. Investigations of anticipated problems were then carried out at the Metallurgical Laboratory (now Argonne National Laboratory) in Chicago until in 1946, when a committee, acting for Colonel K.D. Nichols, District Engineer, Manhattan District, reviewed the work which had been done and initiated the broad program which is underway today. At the present time, the research work is divided between Clinton Laboratories under Dr. Wigner and the Argonne National Laboratory under Dr. W. H. Zinn.

General Electric Company, which now operates Hanford Engineer Works at Pasco, Washington, is working on several different designs of nuclear reactors, or piles, for the generation of electric power. No basic design has been agreed upon. The General Electric research program is under the direction of Dr. C. G. Suits and includes research on a wide range of equipment for nuclear power plants and the study of ship propulsion by nuclear energy. A government-owned atomic power laboratory is scheduled to be built at Schenectady, New York for this work.

The power pile program at Oak Ridge is now at the stage of putting together the preliminary design. Meanwhile, the problems which are being actively worked on are: the actual size and shape of the fuel unit, the method of transferring heat from the pile to the heat engine or the prime mover, the problem of loading and unloading the pile, the problem of automatic control of the pile and its accessory equipment, including steam turbine and generator and the problem of shielding the whole unit for protection against radiation.

"This pilot plant for nuclear power will be pushed to completion as rapidly as possible," said Dr. James H. Lum, director of Clinton Laboratories. "Numerous experiments must be made before final design can be settled. These experiments may well consume all of 1946 and part of 1947. The difficulties of procurement of equipment of this special category may also delay until 1948 the starting of the final pilot plant."

Considerable emphasis will be laid, during design and construction of the plant upon achieving a heat source of long life and great reliability. These attributes are of particular importance because of the radio activity which renders any pile, once operating, difficult and dangerous to shut down for maintenance. The radio activity requires heavy shielding of the pile,

The pile's first operation will be to provide heat energy for steam

MORE

electric generation, operating at conventional central station temperature levels ranging from 650 degrees F. to 940 degrees F.

No indication may be had as yet of the capacity of the pilot plant. It is possible that all equipment will be relatively conventional from the boiler through the generator. None of the major components has yet been ordered and their production would require months under normal circumstances.

The Monsanto Chemical Company accepted the assignment for the experimental project at the specific request of the Manhattan Project. In an effort to obtain the best talent and to give industrial concerns an opportunity to participate in the experiment, invitations to various companies and groups were issued by Monsanto as prime government contractor. Engineers and scientists from the companies invited have been given leaves of absence from their firms, and assigned to the power project.

Representative groups affording working members to the power plant are:

Allis-Chalmers Company, Milwaukee, Wisconsin
Babcock & Wilcox Company, New York, New York
Bureau of Ships, U. S. Navy, Washington
Frederick Flader, Inc., Tonawanda, New York
General Electric Company, Schenectady, New York
National Advisory Committee of Aeronautics, Washington
Northrop Aircraft Corporation, Hawthorne, California
Tennessee Valley Authority, Knoxville, Tennessee
Purdue University, Lafayette, Indiana
Wright Aeronautical Corporation, Woodbridge, New Jersey
University of Wisconsin, Madison, Wisconsin
University of Chicago, Chicago, Illinois

Individuals and industrial companies who are performing consultant service with the Power Pile Division are:

F. H. Colvin, Point Pleasant, New Jersey
Dr. Farrington Daniels, University of Wisconsin
Combustion Engineering Company, New York City
Commonwealth Edison Company, New York City
Foster Wheeler Corporation, New York City
Frederick Flader, Inc., Tonawanda, New York
General Electric Company, Schenectady, New York
J. E. Willard University of Wisconsin
J. I. Yellot, research director of the Locomotive Development Committee (a research group sponsored by several railroads and coal companies) Baltimore, Maryland,
National Carbon Company, Atlanta, Georgia

MORE

The problems will include turbines, blowers, condensors, heat transfer units and generators, and some of the companies participating are experts in these fields. The services of these experts will be utilized to the fullest extent. Basically, the present program is confined to a study of the overall problem with each group joining in the various studies.

TECHNICAL PROBLEMS

In a consideration of the generation of electric power from atomic energy it is important to realize that atomic or nuclear energy does not involve entirely new methods of power generation as did the steam engine; it is simply a new fuel and can be used only within the framework of present day power generating systems. Although there is a remote possibility that in the future some of the energy available within the atom may be released directly through a medium other than a heat engine, such a device is not at present known. The current work is concentrated on the problem of adapting present power producing techniques and equipment to this new type of fuel.

As matters stand, no element of a power plant can be omitted when nuclear energy is used to replace our present forms of fuel, although fuel handling equipment will be greatly reduced in size and may be omitted entirely in plants designed to operate for a limited time.

A great deal which has been written since August 6, 1945 has created the general impression that the solution to the problem of power generation from nuclear energy was achieved when the bomb was successfully tested. This has no basis in fact. A bomb and a power pile are two vastly different problems.

The bomb was a "one-shot" device. The objective in bomb development was an explosion, and the consequent destruction of the bomb. A stationery power pile, on the other hand, must be designed to last for many years. It must be capable of starting and stopping quickly, and of being controlled continuously with precision, over a wide range. Furthermore, its design must incorporate features to prevent irradiation of personnel.

The designer of an atomic power pile has practically no data to guide him, so new is the field. He must feel his way without certainty of the correctness of his design until actual tests of the completed structure are conducted.

The difficulties confronted in designing and constructing an atomic power plant can be broken down into four broad fields:

1. Materials of construction
2. Heat transfer medium
3. Auxiliary and operating equipment
4. Safety.

MORE

Concerning the first category, materials of construction, materials must be found which not only meet the requirements of present power production facilities, that is, possess strength, resistance to deformation and ability to withstand high temperature, but also have the additional quality of not breaking down under neutron bombardment. The metals used in a power pile must be capable of withstanding very high operating temperatures and considerable research and testing will be required to develop suitable metals.

A suitable moderator to slow the neutrons down to the desirable speed must be employed in some pile designs. Again, besides possessing the required neutron and moderating qualities, this material must be capable of operating continuously at high temperatures.

The second major field of difficulty which requires much research and investigation is the choice of a suitable heat transfer medium or pile coolant. The purpose of the coolant is to remove the heat generated by fission within the power pile and convey this heat energy to the power system. Theoretically, it is possible to use ordinary water, heavy water, gases, or liquids other than water. Several liquid metals are being studied, but little is known of their properties from a nuclear and corrosive standpoint.

The third broad field is the design and development of auxiliary and operating equipment such as pumps, blowers, valves and heat exchangers. Since these may become radioactive during operation of the pile, they must be so designated as to be trouble free and must require either no maintenance for extended periods of time, or maintenance by remote control apparatus which entails obvious difficulties. Further, because of the danger to the personnel, the pumps, blowers and valves must remain absolutely tight and prevent any leakage.

The protection of pile operators from radiation and radio activity and other fission products is the fourth broad field of difficulty confronting the designer of an atomic power plant. The radio activity emanating from a power pile is the equivalent of tons of radium. Much of this radio activity persists even after the pile is shut down. For protection against the radiation it is necessary to use materials that are effective in slowing down or stopping neutrons and in absorbing gamma rays. At Hanford, where plutonium production piles are located, massive shields are necessary.

Thick shields are required even for piles producing a relatively small amount of power. At the present time this is a major difficulty retarding the development of small atomic power plants or nuclear reactors.

Besides these four broad fields of investigation, several long range considerations must enter into any discussion of the generation of usable power from an atomic pile.

MORE

It is important to keep in mind that we do not at this time have sufficient knowledge or experience with nuclear fuels, to make any predictions as to the future economic position of nuclear fuels with relation to conventional fuels.

COST FACTORS

A report on the cost estimates of nuclear power was recently made to the United States representative, Mr. Bernard M. Baruch, on the United Nations Atomic Energy Commission. The study was made by members of the staff of Clinton Laboratories at Oak Ridge and the Monsanto Chemical Company Engineering Department under the direction of Dr. Charles A. Thomas, Vice President and Technical Director of the Monsanto Chemical Company.

The report follows in part:

"While no such plant (nuclear power plant) has ever been built, it is felt probable that a large stationary nuclear power plant could be built. Based on prices now current, a plant designed along the lines indicated and producing 75,000 kilowatts could be built in a normal locality in the eastern United States for approximately $25,000,000. On the assumption that the plant would operate at 100 percent of capacity and that interest charges on the investment would be three percent, the operating cost of the plant would be approximately 0.8¢ per kilowatt hour.

"This is to be compared with coal power plants which would cost $10,000,000 under the same conditions. The operating cost depends on the price of coal. The price of bituminous coal of 13,500 BTU is about $3.50 per ton at the mine and about $7.00 per ton delivered to the furnaces of a power plant in the eastern United States. The operating cost of such a power plant would be approximately 0.65¢ per kilowatt hour, again on the assumption that the plant would operate at 100 per cent of capacity and that the interest charges on the investment would be 3 per cent. Equality of operating costs between coal power plants and nuclear power plants would be reached if the coal cost $10 per ton. It must be realized that lower costs of nuclear power plants can best be achieved by continued research and development.

"It should be emphasized that these costs imply the successful solution of a number of difficult technological problems.

"In the case of nuclear power, the operating cost is greatly affected by the large investment, which is reflected in the interest, depreciation and maintenance charges. The labor and supervision charges for the nuclear plant are expected to be greater than for the coal plant, until such time as the production of electrical power from nuclear energy has been further developed. It seems reasonable to expect that the future development of nuclear power will result in the standardization of design and construction, and a material reduction in the investment and operating cost.

MORE

"The cost of power from coal is primarily determined by the price of coal, which constitutes about 55 per cent of the total operating cost. The prices of coal and fuel oil have increased greatly since before the war and show signs of increasing further in the future. The coal plant figures are based on high quality coal as delivered to plants in the eastern part of the United States during the second half of 1946. It would appear that the cost of nuclear power may decrease and the cost of coal power may increase as time goes by, and that the development of nuclear power may prove to be attractive to those industries which are capable of undertaking the development.

"Nuclear power plants would make feasible a greater decentralization of industry, a desirable factor in the world economy. Only a trivial amount of fuel need be brought in, and the need for a large cooling water supply might be obviated by the development of gas turbines.

"Nuclear power plants in contradistinction to hydroelectric power plants have the advantage of being able to supply process and heating steam directly in addition to power. Because nuclear plants lend themselves to decentralization, more economical industrial combinations should develop.

"Research has already shown possibilities for use of radioactive isotopes in analytical work and medical treatment. These isotopes would be valuable by-products from the production of power, although they would probably have little effect on the economics of power generation.

"The nuclear power plant might aid in the industrial development of isolated parts of the world where the cost of oil, gas or coal is prohibitive and where a suitable water supply is unavailable, because the nuclear power plant, if combined with the modern gas turbine, would make unnecessary a supply of any such fuels or cooling water.

"The nuclear power plant, in connection with the modern gas turbine, might be desirable as operating or standby plants to existing large utilities.

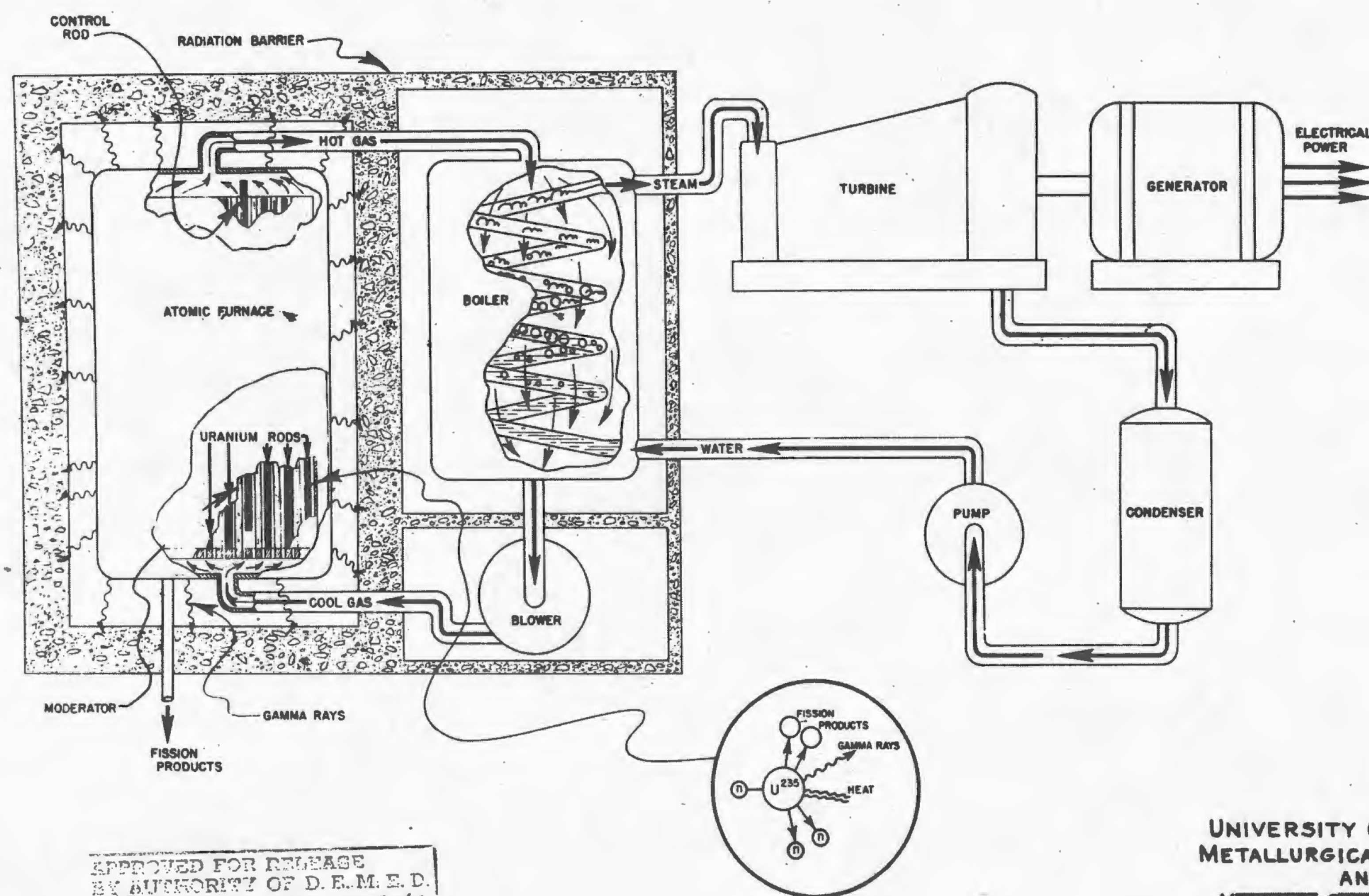
"On the basis of this study, and other similar studies which have been made recently, it seems probable that nuclear power will find favorable industrial application if obstacles are not placed in the path of its development.

"It is not altogether a case of nuclear power versus coal, oil or water power, because the nuclear power plant has advantages and fields of application not open to other types of power producing plants."

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dg, Dm, E, Ea, Ma, N, Sc, T.
11-18-46
3:00 P.M.

DANIELS ATOMIC POWER PLANT



UNIVERSITY OF CHICAGO
METALLURGICAL LABORATORY
AND
MONSANTO CHEMICAL COMPANY
CLINTON LABORATORIES

FEB. 10, 1946
C.R. McCullough E E Hauk

46 2884

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. RE 6700
Brs. 2528 and 4860

IMMEDIATE RELEASE

November 26, 1946

MEMORANDUM FOR THE PRESS

Representatives of the press will be welcome at a meeting of the scientific staff of the Argonne National Laboratory and of the representatives of the 25 participating universities at Chicago Monday, December 2, 1946. The meeting is being held in observance of the fourth anniversary of the Chicago Pile experiment and papers to be presented will cover the progress of nuclear research during the past four years. First session is at 10:A.M. at the Chicago Museum of Science and Industry and arrangements for attending should be made with William Morganstern of the University of Chicago Office of Press Relations, Telephone MIdway 0800, Ext. 789.

Among the speakers are Dr. Farrington Daniels, Dr. Enrico Fermi, Major General L. R. Groves, Dr. Winston M. Manning, Dr. John T. Tate, Dr. Robert B. Withrow, Dr. W. H. Zinn, Dr. Raymond E. Zirkle.

END

Distribution : N,Y.
9:45 AM

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. RE 6700
Brs. 2528 and 4860

I M M E D I A T E R E L E A S E

November 28, 1946

CEREMONIES TO MARK
ATOMIC ANNIVERSARY

December 2nd, the "significant anniversary" of the United States program of development in atomic energy will be observed at the three main installations of the Manhattan Project as well as in Chicago where the first successful nuclear chain reactor was made to work on that date in 1942.

At Oak Ridge, Tennessee, the Oak Ridge Association of Scientists and Engineers will join the local Kiwanis Club, as a part of a national observance by Kiwanians, in a program commemorating the anniversary.

Principal speaker at the Kiwanis meeting will be Doctor Eugene P. Wigner, theoretical physicist, who had a substantial part in designing the December 2 pile. Dr. Wigner was present at the historic experiment beneath the West Stands of Stagg Field, Chicago, when the pile was first operated.

A banquet will feature the observance by the Hanford Engineer Works, Pasco, Washington. The main speaker will be Doctor William P. Overbeck, head of the Engineering Division at Hanford. He was present at the Chicago experiment, and helped in the construction of the pile. Other speakers will include Lt. Col. F. J. Clarke, Commanding Officer, HEW, who will speak on his role as an observer at the recent Bikini tests, and Mr. H. D. Lauder, Works manager for General Electric the Hanford Operating Contractor, who will discuss the present and immediate future program at Hanford and Schenectady.

It is planned to make this an annual event at Hanford.

Los Alamos will celebrate the event with radio and movie programs during the day, followed by a forum in the evening. Col. H. C. Gee, Commanding Officer of the Atomic Bomb Laboratory, will outline the permanent community development construction program now in progress at Los Alamos. Eminent Manhattan Project scientists will describe to Los Alamos residents certain aspects of atomic development.

MORE

The Argonne National Laboratory, Chicago, will commemorate the December 2 experiment with a meeting of the scientific staff of the Laboratory and of the representatives of the 25 participating universities. Papers to be presented at this meeting will cover the progress of nuclear research during the four years since the Chicago pile experiment. Among the speakers will be Dr. Farrington Daniels, Dr. Enrico Fermi, Major General L. R. Groves, Dr. Winston M. Manning, Dr. John T. Tate, Dr. Robert B. Withrow, Dr. W. H. Zinn, and Dr. Raymond E. Zirkle.

The first session of this meeting will be at 10:00 A.M. at the Chicago Museum of Science and Industry.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, N.
12:30 P.M.

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. RE 6700
Brs. 2528 and 4860

IMMEDIATE RELEASE

November 29, 1946

CONSTRUCTION CONTRACT AWARD
ANNOUNCED BY WAR DEPARTMENT

The War Department today announced the award of a contract to the Maxon Construction Company of Dayton, Ohio, for construction of facilities near Dayton in connection with work performed for the Manhattan Project by the Monsanto Chemical Company. Cost of the construction will be more than $5,000,000. Work will start in December.

END

DISTRIBUTION: Aa, Af, D, G, K, L, N.
10:45 A.M.

FUTURE RELEASE PLEASE NOTE DATE

WAR DEPARTMENT
Public Relations Division
PRESS SECTION
Tel. RE 6700
Brs. 2528 and 4860

FOR RELEASE SUNDAY, DECEMBER 1, 1946

BACKGROUND MATERIAL FOR USE IN CONNECTION WITH OBSERVANCE OF THE FOURTH ANNIVERSARY, DECEMBER SECOND, OF THE SCIENTIFIC EVENT OF OUTSTANDING SIGNIFICANCE IN THE UNITED STATES PROGRAM OF DEVELOPMENT OF ATOMIC ENERGY.

Note to Editors: The successful operation on December 2, 1942, of the first self-sustaining nuclear chain reactor is considered by Major General L. R. Groves, Chief of the Manhattan Project, as the scientific event of outstanding significance in the development of atomic energy. In a recent message to all Manhattan Project personnel, General Groves said, "That was the day on which man first demonstrated that not only could he release the energy of the atom but he could control it." The following account of the December 2 experiment at Chicago, and the review of the scientific work preceding it, was prepared by the Public Relations Section of the Manhattan Project from the eye-witness accounts of a number of scientists and technicians who took part in the experiment. While the "Chicago Pile" has been dismantled to provide materials for other eye-witness accounts of piles, the scene on the squash court under the stands of Stagg Field has been preserved in two sketches by Staff Artist Melvin A. Miller of the Argonne National Laboratory in Chicago. Prints of these sketches have been made available through the Pictorial Section, War Department Public Relations Division, and distributed by news picture agencies.

On December 2, 1942, man first initiated a self-sustaining nuclear chain reaction, and controlled it.

Beneath the West Stands of Stagg Field, Chicago, late in the afternoon of that day, a small group of scientists witnessed the advent of a new era in science. History was made in what had been a squash-rackets court.

Precisely at 3:25 P.M., Chicago time, scientist George Weil withdrew the cadmium plated control rod and by his action man unleashed and controlled the energy of the atom.

MORE

As those who witnessed the experiment became aware of what had happened, smiles spread over their faces and a quiet ripple of applause could be heard. It was a tribute to Enrico Fermi, Nobel Prize winner, to whom, more than to any other person, the success of the experiment was due.

Fermi, born in Rome, Italy, on September 29, 1901, had been working with uranium for many years. In 1934 he bombarded uranium with neutrons and produced what appeared to be both element 93 (uranium is element 92) and also element 94. However, after closer examination it seemed as if nature had gone wild...several other elements were present, but none could be fitted into the periodic table near uranium--where Fermi knew they should have fitted if they had been the transuranic elements 93 and 94. It was not until five years later that anyone, Fermi included, realized he had actually caused fission of the uranium and that these unexplained elements belonged back in the middle part of the periodic table.

Fermi was awarded the Nobel Prize in 1938 for his work on transuranic elements. He and his family went to Sweden to receive the prize. The Italian Fascist press severely criticized him for not wearing a Fascist uniform and failing to give the Fascist salute when he received the award. The Fermis never returned to Italy.

From Sweden, having taken most of his personal possessions with him, Fermi proceeded to London and thence to America where he has remained ever since.

An outsider, looking into the squash court where the experiment took place, would have been greeted by a strange sight. Shrouded on all but one side by a grey balloon cloth envelope, was a pile of black bricks and wooden timbers. During the construction of this crude appearing vitally important "pile"--the name that has since been applied to all such devices--the standing joke among those working on it was: "If people could see what we're doing with a million-and-a-half of their dollars, they'd think we were crazy. If they knew why we were doing it, they'd be sure we were."

In relation to the fabulous atomic bomb program, of which the Chicago Pile experiment was a key part, the successful result reported on December 2 formed one more piece for the jigsaw puzzle which is atomic energy. Confirmation of the chain reactor studies was an inspiration to the leaders of the bomb project, and reassuring at the same time, because the Army's Manhattan Engineer District had moved ahead on many fronts. Contract negotiations were under way to build production-scale nuclear chain reactors, land had been acquired at Oak Ridge, Tennessee, and millions of dollars had been obligated.

Three years before the December 2 experiment, it had been discovered that when an atom of uranium was bombarded by neutrons, the uranium atom

MORE

sometimes split, or fissioned into two parts. Later, it had been found that when an atom of uranium fissioned, additional neutrons were emitted and became available for further reaction with other uranium atoms. These facts implied the possibility of a chain reaction, similar in certain respects to the reaction which is the source of the sun's energy. The facts further indicated that if a sufficient quantity of uranium could be brought together under the proper conditions, a self-sustaining chain reaction would result. This quantity of uranium necessary for a chain reaction under given conditions is known as the critical mass, or, as more commonly referred to, the "critical size" of the particular pile.

For three years the problem of a self-sustaining chain reaction had been assiduously studied. On a cold afternoon nearly a year after Pearl Harbor, a pile of critical size was finally constructed. It worked. A self-sustained nuclear chain reaction was a reality.

Years of scientific effort and study lay behind this demonstration of the first self-sustaining nuclear chain reaction. The story goes back at least to the fall of 1938 when two German scientists, Otto Hahn and Fritz Strassman, working at the Kaiser Wilhelm Institute in Berlin found barium in the residue material from an experiment in which they had bombarded uranium with neutrons from a radium-beryllium source. This discovery caused tremendous excitement in the laboratory because of the difference in atomic mass between the barium and the uranium. Previously, in residue material from similar experiments, elements other than uranium had been found, but they differed from the uranium by only one or two units of mass. The barium differed by approximately 98 units of mass. The question was, where did this element come from? It appeared that the uranium atom when bombarded by a neutron had split into two different elements each of approximately half the mass of the uranium.

Before publishing their work in the German physical journal NATURWISSENSCHAFTEN, Hahn and Strassman communicated with Lise Meitner who, having fled the Nazi controlled Reich, was working with Neils Bohr in Copenhagen, Denmark.

Meitner was very much interested in this phenomenon and immediately attempted to analyze mathematically the results of the experiment. She reasoned that the barium and the other residual elements were the result of a fission, or breaking, of the uranium atom. But when she added the atomic masses of the residual elements, she found this total was less than the atomic mass of uranium.

There was but one explanation: The uranium fissioned or split, forming two elements each of approximately half of its original mass, but not exactly half. Some of the mass of the uranium had disappeared. Meitner and her nephew O. R. Frisch suggested that the mass which disappeared was converted into energy. According to the theories advanced in 1905 by Albert Einstein in which the relationship of mass to energy was stated by the equation $E = mc^2$ (energy is

MORE

equal to mass times the square of the speed of light), this energy release would be of the order of 200,000,000 electron volts for each atom fissioned.

Einstein himself, nearly 35 years before, had said this theory might be proved by further study of radioactive elements. Bohr was planning a trip to America to discuss other problems with Einstein who had found a haven at Princeton University's Institute of Advanced Studies. Bohr came to America, but the principal item he discussed with Einstein was the report of Meitner and Frisch. Bohr arrived at Princeton on January 16, 1939. He talked to Einstein and J. A. Wheeler who had once been his student. From Princeton the news spread by word of mouth to neighboring physicists, including Enrico Fermi at Columbia. Fermi and his associates immediately began work to find the heavy pulse of ionization which could be expected from the fission and consequent release of energy.

Before the experiments could be completed, however, Fermi left Columbia to attend a conference on theoretical physics at George Washington University in Washington, D. C. Here Fermi and Bohr exchanged information and discussed the problem of fission. Fermi mentioned the possibility that neutrons might be emitted in the process. In this conversation, their ideas of the possibility of a chain reaction began to crystallize.

Before the meeting was over, experimental confirmation of Meitner and Frisch's deduction was obtained from four laboratories in the United States (Carnegie Institute of Washington, Columbia, Johns Hopkins, and the University of California). Later it was learned that similar confirmatory experiments had been made by Frisch and Meitner in January 15. Frederic Joliot-Curie in France, too, confirmed the results and published them in the January 30 issue of the French scientific journal, COMPTES RENDUS.

On February 27, 1939, Walter Zinn and Leo Szilard, both working at Columbia University, began their experiments to find the number of neutrons emitted by the fissioning uranium. At the same time, Fermi, and his associates, Herbert L. Anderson and H. B. Hanstein commenced their investigation of the same problem. The results of these experiments were published side-by-side in the April edition of the PHYSICAL REVIEW and showed that a chain reaction might be possible since the uranium emitted additional neutrons when it fissioned.

These measurements of neutron emission by Fermi, Zinn, Szilard, Anderson and Hanstein were highly significant steps toward a chain reaction.

Further impetus to the work on a uranium reactor was given by the discovery of plutonium at the Radiation Laboratory, Berkeley, California, in March 1940. This element, unknown in nature, was formed by Uranium-238 capturing a neutron, and thence undergoing two successive changes in atomic structure with the emission of Beta particles. Plutonium, it was thought might undergo fission if the rare isotope of Uranium, U-235 did. MORE

Meanwhile, at Columbia, Fermi and his associates were working to determine operationally possible designs of a uranium chain reactor. Among other things, they had to find a suitable moderating material to slow down the neutrons, since uranium 235 is most readily fissioned by neutrons traveling at relatively low velocities. In July 1941, experiments with uranium were started to obtain measurements of the reproduction factor, (called "K") which was the key to the problem of a chain reaction. If this factor could be made sufficiently greater than 1, a chain reaction could be made to take place in a mass of material of practical dimensions. If it were less than 1, no chain reaction could occur.

Since impurities in the uranium and in the moderator would capture neutrons and make them unavailable for further reactions, and since neutrons would escape from the pile without encountering uranium atoms, it was not known whether a value for "K" greater than unity could ever be obtained.

One of the first things that had to be determined was how best to place the uranium in the reactor. Fermi and Szilard suggested placing the uranium in a matrix of the moderating material, thus forming a cubical lattice of uranium This placement appeared to offer the best opportunity for a neutron to encounter a uranium atom. Of all the materials which possessed the proper moderating qualities, graphite was the only one which could be obtained in sufficient quantity of the desired degree of purity.

The study of graphite-uranium lattice reactors was started at Columbia in July 1941, but after reorganization of the entire uranium project in December 1941, Arthur H. Compton, was placed in charge of this phase of the work, under the Office of Scientific Research and Development, and the chain reactor program was concentrated at the University of Chicago. Consequently, early in 1942 the Columbia and Princeton groups were transferred to Chicago where the Metallurgical Laboratory was established.

In a general way the experimental nuclear physics group under Fermi was primarily concerned with getting a chain reaction going, the chemistry division organized by F. H. Spedding (later in turn under S. K. Allison, J. Franck, W. C. Johnson, and T. Hogness) with the chemistry of plutonium and with separation methods, and the theoretical group under E. Wigner with designing production piles. However, the problems were intertwined and the various scientific and technical aspects of the fission process were studied in whatever group seemed best equipped for the particular task.

At Chicago, the work on sub-critical size piles was continued. By July 1942 the measurements obtained from these experimental piles had gone far enough to permit a choice of design for a test pile of critical size. At that time, the dies for the pressing of the uranium oxides were designed by Zinn and ordered made. It was a fateful step, since the entire construction of the pile depended upon the shape and size of the uranium pieces.

MORE

It was necessary to use uranium oxides because metallic uranium of the desired degree of purity did not exist. Although several manufacturers were attempting to produce the uranium metal, it was not until November that any appreciable amount was available. At that time, Westinghouse Electric and Manufacturing Company, Metal Hydrides Company, and F. H. Spedding, who was working at Iowa State College at Ames, Iowa, delivered several tons of the highly purified metal and it was placed in the pile, as close to the center as possible. The procurement program for moderating material and uranium oxides had been handled by Norman Hilberry. R. L. Doan headed the procurement program for pure uranium metal.

Although the dies for the pressing of the uranium oxides were designed in July, additional measurements were necessary to obtain information about controlling the reaction, to revise estimates as to the final critical size of the pile, and to develop other data. Thirty experimental sub-critical piles were constructed before the final pile was completed.

Meantime, in Washington, early in 1942 Dr. Vannevar Bush, Director of the Office of Scientific Research and Development, had recommended to President Roosevelt that a special Army Engineer organization be established to take full responsibility for the development of the atomic bomb. During the summer the Manhattan Engineer District was created, and early in September 1942, Major General L. R. Groves assumed command.

Construction of the main pile started in November. The Chicago project gained momentum, with machining of the graphite blocks, pressing of the uranium oxide pellets, and the design of instruments. Fermi's two construction crews, one under Zinn and the other under Anderson, worked almost around the clock. V. C. Wilson headed up the instrument work.

Original estimates of the critical size of the pile were pessimistic. As a further precaution, it was decided to enclose the pile in a balloon cloth bag which could be evacuated to remove the neutron-capturing air.

This balloon cloth bag was constructed by Goodyear Tire and Rubber Company. Specialists in designing gas-bags for lighter-than-air craft, the company's engineers were a bit puzzled about the aerodynamics of a square balloon. Security regulations forbade informing Goodyear of the purpose of the envelope and so the Army's new square balloon was the butt of much joking.

The bag was hung with one side left open, in the center of the floor a circular layer of graphite bricks was placed. This and each succeeding layer of the pile was braced by a wooden frame. Alternate layers contained the uranium. By this layer-on-layer construction a roughly spherical pile of uranium and graphite was formed.

MORE

Facilities for the machining of graphite bricks were installed in the West Stands. Week after week this shop turned out graphite bricks. This work was done under the direction of Zinn's group, by skilled mechanics led by millwright August Knuth. In October, Anderson and his group joined Zinn's men.

Describing this phase of the work, Albert Wattenberg, one of Zinn's group, said: "We found out how coal miners feel. After eight hours of machining graphite, we looked as if we were made up for a minstrel. One shower would only remove the surface graphite dust. About a half-hour after the first shower the dust in the pores of your skin would start oozing.

"Walking around the room where we cut the graphite was like walking on a dance floor. Graphite is a dry lubricant, you know, and the cement floor covered with graphite dust was slippery."

Before the structure was half complete measurements indicated that the critical size at which the pile would become self-sustaining was somewhat less than had been anticipated in the design.

Day after day the pile grew toward its final shape. And as the size of the pile increased, so did the nervous tension of the men working on it. Logically and scientifically they knew this pile would become self-sustaining. It had to. All the measurements indicated that it would. But still the demonstration had to be made. No matter how well planned, there is always a chance that an experiment will not fulfill expectations. So, as the eagerly awaited moment drew nearer, they gave greater and greater attention to details, the accuracy of measurements, and exactness of their construction work.

Guiding the entire pile construction and design was the nimble-brained Fermi, whose associates describe him as "completely self-confident but wholly without conceit."

So exact were Fermi's calculations, based on the measurements taken from the partially finished pile, that days before its completion and demonstration on December 2, he was able to predict almost to the exact brick the point at which the reactor would become self-sustaining.

But with all their care and confidence, few in the group knew the extent of the heavy bets being placed on their success. In Washington, General Groves had proceeded with negotiations with E. I. du Pont de Nemours Company to design, build, and operate a plant based on the principles of the Chicago pile. The $350,000,000 Hanford Engineer Works at Pasco, Washington, was to be the result.

At Chicago during the early afternoon of December 1, tests indicated that critical size was rapidly being approached. At 4 P.M. Zinn's group was relieved by the men working under Anderson. Shortly afterwards, the last layer of graphite

MORE

and uranium bricks was placed on the pile. Zinn, who remained, and Anderson made several measurements of the activity within the pile. They were certain that when the control rods were withdrawn, the pile would become self-sustaining. Both had agreed, however, that should measurements indicate the reaction would become self-sustaining when the rods were withdrawn, they would not start the pile operating until Fermi and the rest of the group could be present. Consequently, the control rods were locked and further work was postponed until the following day.

That night the word was passed to the men who had worked on the pile that the trial run was due the next morning.

About 8:30 on the morning of Wednesday, December 2, the group began to assemble in the squash court.

At the north end of the squash court was a balcony about ten feet above the floor of the court. There the largest part of the observers stayed. Fermi, Zinn, Anderson and Compton were grouped around an instrument console at the east end of the balcony. The remainder of the observers were crowded on the rest of the balcony. R. G. Nobles, one of the young scientists who worked on the pile put it this way: "The control cabinet was surrounded by the 'big wheels'; us 'little wheels' had to stand back."

On the floor of the squash court, just beneath the balcony, stood George Weil, whose duty it was to handle the final control rod. In the pile were three sets of control rods. One set was automatic and could be controlled from the balcony. Another was an emergency safety rod. Attached to one end of this rod was a rope running through the pile, weighted heavily on the opposite end. The rod was withdrawn from the pile and tied by rope to the balcony. Hilberry was ready to cut the rope with an axe should something unexpected happen, or in case the automatic safety rods failed. The third rod, operated by Weil, was the one which actually held the reaction in check until the rod was withdrawn the proper distance.

Since this demonstration was new and different from anything ever done before, complete reliance was not placed on mechanically operated control rods. Therefore, a "liquid-control squad," composed of Harold Lichtenberger, W. Nyer and A. C. Graves, stood on a platform above the pile. They were prepared to flood the pile with cadmium-salt solution in case of mechanical failure of the control rods.

Each group rehearsed what they had to do during the experiment.

At 9:54 Fermi ordered the electrically operated control rods withdrawn. The man at the controls threw the switch to withdraw them. A small motor whirred. All eyes watched the lights which indicated the rods' position.

MORE

But quickly, the balcony group turned to watch the counters, whose clicking stepped up after the rods were out. The indicators of these counters resembled the face of a clock, with "hands" to indicate neutron count. Nearby was a recorder, whose quivering pen traced the neutron activity within the pile.

Shortly after ten o'clock, Fermi ordered the emergency rod, called "Zip," pulled out and tied.

"Zip out," said Fermi. Zinn withdrew "Zip" by hand and tied it to the balcony rail. Weil stood ready by the "vernier" control rod which was marked to show the number of feet and inches which remained within the pile.

At 10:37 Fermi, without taking his eyes off the instruments, said quietly:

"Pull it to 13 feet, George." The counters clicked faster. The graph pen moved up. All the instruments were studied, and computations were made.

"This is not it," said Fermi. "The trace will go to this point and level off." He indicated a spot on the graph. In a few minutes the line came to the indicated point and did not go above that point. Seven minutes later Fermi ordered the rod out another foot.

Again the counters stepped up their clicking, the graph pen edged upwards. But the clicking was irregular. Soon it levelled off, as did the thin line of the pen. The pile was not self-sustaining--yet.

At 11 o'clock, the rod came out another six inches; the result was the same: an increase in rate, followed by the levelling-off.

Fifteen minutes later, the rod was further withdrawn and at 11:25 was moved again. Each time the counters speeded up, the pen climbed a few points. Fermi predicted correctly every movement of the indicators. He knew the time was near. He wanted to check everything again. The automatic control rod was reinserted without waiting for its automatic feature to operate. The graph line took a drop, the counters slowed abruptly.

At 11:35, the automatic safety rod was withdrawn and set. The control rod was adjusted and "Zip" was withdrawn. Up went the counters, clicking, clicking, faster and faster. It was the clickety-click of a fast train over the rails. The graph pen started to climb. Tensely, the little group watched, and waited, entranced by the climbing needle.

Whrrrump! As if by a thunder clap, the spell was broken. Every man froze--then breathed a sigh of relief when he realized the automatic rod had slammed home. The safety point at which the rod operated automatically had inadvertently been set too low.

MORE

"I'm hungry," said Fermi. "Let's go to lunch."

Perhaps, like a great coach, Fermi knew when his men needed a "break."

It was a strange "between halves" respite. They got no pep talk. They talked about everything else but the "game." The redoubtable Fermi, who never says much, had even less to say. But he appeared supremely confident. His "team" was back on the squash court at 2:00 P.M. Twenty minutes later, the automatic rod was reset and Weil stood ready at the control rod.

"All right, George," called Fermi, and Weil moved the rod to a predetermined point. The spectators resumed their watching and waiting, watching the counters spin, watching the graph, waiting for the settling down and computing the rate of rise of reaction from the indicators.

At 2:50 the control rod came out another foot. The counters nearly jammed, the pen headed off the graph paper. But this was not it. Counting ratios and the graph scale had to be changed.

"Move it six inches," said Fermi at 3:20. Again the change--but again the levelling off. Five minutes later, Fermi called:

"Pull it out another foot."

Weil withdrew the rod.

"This is going to do it," Fermi said to Compton, standing at his side. "Now it will become self-sustaining. The trace will climb and continue to climb. It will not level off."

Fermi computed the rate of rise of the neutron counts over a minute period. He silently, grim-faced, ran through some calculations on his slide rule.

In about a minute he again computed the rate of rise. If the rate was constant and remained so, he would know the reaction was self-sustaining. His fingers operated the slide rule with lightning speed. Characteristically, he turned the rule over and jotted down some figures on its ivory back.

Three minutes later he again computed the rate of rise in neutron count. The group on the balcony had by now crowded in to get an eye on the instruments, those behind craning their necks to be sure they would know the very instant history was made. In the background could be heard William Overbeck calling out the neutron count over an annunciator system. Leona Marshall--the only girl present--Anderson, and William Sturm were recording the readings from the instruments. By this time the click of the counters was too fast for the human ear. The clickety-click was now a steady brrrrr. Fermi, unmoved, unruffled,

MORE

continued his computations.

"I couldn't see the instruments," said Weil. "I had to watch Fermi every second, waiting for orders. His face was motionless. His eyes darted from one dial to another. His expression was so calm it was hard. But suddenly, his whole face broke into a broad smile."

Fermi closed his slide rule ---

"The reaction is self-sustaining," he announced quietly, happily. "The curve is exponential."

The group tensely watched for twenty-eight minutes while the world's first nuclear chain reactor operated.

The upward movement of the pen was leaving a straight line. There was no change to indicate a levelling off. This was it.

"O.K., 'Zip' in," called Fermi to Zinn who controlled that rod. The time was 3:53 P.M. The rod entered the pile. Abruptly, the counters slowed down, the pen slid down across the paper. It was all over.

Man had initiated a self-sustaining nuclear reaction--and then stopped it. He had released the energy of the atom, and controlled it.

Right after Fermi ordered the reaction stopped, the Austrian-born theoretical physicist Eugene Wigner presented him with a bottle of Chianti wine. All through the experiment Wigner had kept this wine hidden behind his back.

Fermi uncorked the wine bottle and sent out for paper cups so all could drink. He poured a little wine in all the cups, and silently, solemnly, without toasts, the scientists raised the cups to their lips--Fermi, Compton, Wigner, Zinn, Szilard, Anderson, Hilberry and a score of others. They drank to success--and to the hope they were the first to succeed.

A small crew was left to straighten up, lock controls, and check all apparatus. As the group filed from the West Stands, one of the guards asked Zinn:

"What's going on, Doctor, something happen in there?"

He didn't hear the report which had gone to General Groves nor the message which Arthur Compton was giving James B. Conant at Harvard, by long distance telephone. Their code was not prearranged.

"The Italian navigator has landed in the New World," said Compton.
"How were the natives?" asked Conant.
"Very friendly."

MORE

LIST OF THOSE PRESENT AT "CHICAGO PILE" EXPERIMENT, DECEMBER 2, 1942

H. M. Agnew, Denver, Colo.
S. K. Allison, Chicago
H. L. Anderson, Chicago
H. M. Barton, Bartlesville, Okla.
T. Brill, Chicago
R. F. Christy, Pasadena, Calif.
A. H. Compton, St. Louis
E. Fermi, Chicago
R. J. Fox, Bentonville, Ark.
S. A. Fox, Bentonville, Ark.
D. K. Froman, Denver, Colo.
A. C. Graves, Los Alamos, N. Mex.
C. H. Greenewalt, Wilmington, Del.
N. Hilberry, Chicago
D. L. Hill, Corinth, Miss.
W. H. Hinch, Denver, Colo.
W. R. Kanne, Schenectady, N. Y.
P. G. Koontz, Fort Collins, Colo.
H. E. Kubitschek, Maywood, Ill.
H. V. Lichtenberger, Chicago
Mrs. L. Woods Marshall, Chicago
G. Miller, Chicago
G. Monk, Jr., New York City
H. W. Newson, Lawrence, Kans.
R. G. Nobles, Willow Springs, Ill.
W. E. Nyer, Chicago
W. P. Overbeck, Richland, Wash.
H. J. Parsons, Chicago
L. Sayvetz, New York City
G. S. Pawlicki, Chicago
L. Seren, Schenectady, N. Y.
L. A. Slotin, Winnipeg, Can. (deceased)
F. H. Spedding, Ames, Iowa
W. J. Sturm, Chicago
L. Szilard, Chicago
A. Wattenburg, New York City
R. J. Watts, Denver, Colo.
G. L. Weil, New York City
E. P. Wigner, Oak Ridge, Tenn.
M. Wilkening, Chicago
V. C. Wilson, Chicago
W. H. Zinn, Chicago

BIOGRAPHIES

ARTHUR HOLLY COMPTON, now chancellor of Washington University at St. Louis, and former dean of the division of physical sciences at the University of Chicago, is probably the world's foremost experimentalist in the field of radiant energy. He received the Nobel Prize in Physics in 1927, making him the third physicist in American history to receive the award. He joined the University of Chicago in 1923, and in 1940 was made dean. For the period of 1941-45 he was in charge of the Metallurgical Project of the Manhattan Project.

ENRICO FERMI, self-exiled Italian physicist, consultant to the Argonne National Laboratory and Professor of physics at the University of Chicago, received the Nobel Prize in 1938. He was cited by the War Department as the first man to achieve nuclear chain reaction. During the war, he was associate director of the Los Alamos Laboratory. Forty-five years old, Fermi was born in Rome and was professor of theoretical physics at the University of Rome from 1927 to 1938, when he left the country because of opposition to Fascism. He was the first to systematize the science of physics in Italy. Mr. Fermi studied at the University of Pisa, Italy, from 1918-22, and has honorary degrees from the Universities of Utrecht and Heidelberg. Before coming to Chicago with the Metallurgical Laboratory, Fermi worked at Columbia University, New York.

WALTER H. ZINN, director of the Argonne National Laboratory was one of the original members of the Fermi group to work on chain reactors. Zinn was born in Kitchener, Ontario, Canada, in 1906. He received his bachelor and master's degrees from Queen's University in Canada and his doctor's degree from Columbia University, New York, New York. He taught at Columbia, and City College, New York, before coming to Chicago with the Metallurgical Laboratory. With Leo Szilard he performed early experiments showing that neutrons are emitted in the fission process; this work became fundamental in studies on atomic energy. Zinn was in charge of a group which constructed the first chain reacting pile and later supervised the design and construction of the first pile using heavy water as the moderator.

HERBERT L. ANDERSON, assistant professor in physics in the Institute for Nuclear Studies, University of Chicago, received his bachelor of science, bachelor of arts and doctor of philosophy degree from Columbia University. On the atomic bomb project, Anderson did research on nuclear chain reactors with the original Fermi group at Columbia University at Chicago and Los Alamos.

LEO SZILARD, internationally known physicist, who was instrumental in getting President Franklin D. Roosevelt interested in the atomic energy field, is professor of biophysics and professor of social sciences at the University of Chicago. He began his work in the field of nuclear physics in 1934 in London and later continued his work at the University of London. Szilard worked with Enrico Fermi, Nobel Prize physicist on the early phases of work on chain reaction at

MORE

Columbia University and at the Metallurgical Laboratory at the University of Chicago. He was born in Budapest, Hungary, in 1898. Szilard received his Ph D from the University of Berlin in 1922 and served on the University's faculty there from 1925 to 1933. He became an American citizen in 1943.

NORMAN HILBERRY, associate director of the Argonne National Laboratory, was one of the scientists who worked on the December 2 pile. His was the responsibility for procuring moderator material and uranium oxide for the reactor. Born in Cleveland, Ohio, in 1899, Hilberry received his bachelor's degree from Oberlin College, Ohio, and his Ph D in physics from the University of Chicago. He taught at the University of Chicago, and New York University. He is a fellow of the New York Academy of Spectroscopy, and has carried on extensive studies of the discharge of electricity through gases; physical optics; cosmic ray showers; and the constitution of primary cosmic rays and their secondary radiations.

END

11-26-46

FUTURE RELEASE PLEASE NOTE DATE

WAR DEPARTMENT
PUBLIC RELATIONS DIVISION
PRESS SECTION
TEL. RE 6700
BRS. 2528 AND 4860

FOR RELEASE TUESDAY P.M., DECEMBER 10, 1946

MANHATTAN PROJECTS AWARDS
CONTRACT FOR LABORATORY

Manhattan Project, War Department agency for atomic energy, today announced the award of a contract to Hydrocarbon Research, Incorporated, 115 Broadway, New York, New York, for architectural and engineering services in connection with the construction of the Brookhaven National Laboratory, Patchogue, Long Island, New York.

The new laboratory, one of a chain of government sponsored and financed atomic research laboratories, will be built on the site of former Camp Upton. The laboratory will be operated under contract by Associated Universities, Incorporated, a special research agency formed by nine major eastern universities.

The contract with Hydrocarbon Research, Incorporated, covers architectural and engineering services, including design, engineering, specifications, inspection and supervision of construction.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, G, K, L, N, Sc.
12-9-46
5:15 P.M.

IMMEDIATE RELEASE

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON 25, D. C.

December 11, 1946

ATOMIC ENERGY COMMISSION TO ABSORB MANHATTAN ENGINEER DISTRICT JANUARY 1

The Atomic Energy Commission today announced that it plans to take over the organization and properties of the Manhattan Engineer District, War Department atomic energy agency, on or about January 1, 1947.

In accordance with plans under discussion with the War Department, the Commission stated that transfer of personnel, funds, and properties would be effective as of that date. The transfer will be by Presidential Order, under the terms of the Atomic Energy Act of 1946 creating the five-member Commission.

The transfer order will terminate the temporary arrangements made immediately after the appointment of the Commission on October 28, whereby the War Department agreed to continue the custody and operations of the atomic energy program until such time as the Commission was prepared to assume responsibility for the operation of the facilities.

The purpose of the Commission is to assume its full responsibilities under the Act at the earliest possible date, and in order to avoid interruption of present operations of the facilities and associated contractors, the Manhattan District organization, including both personnel and property, will be taken over essentially intact.

Discussions with the War Department are continuing on administrative and legal details of the transfer, on the temporary provision by the War Department of certain administrative services, on security and on the loan of military personnel.

Since its appointment, the Commission has worked closely with Major General L. R. Groves, Commanding General of the Manhattan Project, and with the members of his staff in the preparation of plans for the transfer to the Commission of operating responsibility for the Project. The fullest possible cooperation has been accorded by all personnel of the Manhattan Project and the War Department. The Commission has expressed a desire to the Secretary of War and to General Groves that following the January 1 transfer General Groves continue to be available as a consultant.

MORE

The ultimate form of the organization and the program of the Commission to carry out the purposes of the Atomic Energy Act are now in planning stages and will be developed in the transitional period following the transfer of the properties.

END

DISTRIBUTION: Aa, Af, B, Da, Dd, Dm, N.
12:30 P. M.

IMMEDIATE **RELEASE**

WAR DEPARTMENT
PUBLIC RELATIONS DIVISION
PRESS SECTION
TEL. RE 6700
BRS. 2528 AND 4860

December 31, 1946

STATEMENT OF SECRETARY OF WAR PATTERSON
ON TRANSFER OF MANHATTAN DISTRICT

With the transfer of responsibility for the Nation's atomic energy program from the War Department to the U. S. Atomic Energy Commission, we will have carried out the long range plans of President Roosevelt, President Truman, Secretary Stimson, and General Marshall, who months before Hiroshima clearly recognized that Congress should create an independent agency of the government to carry on this vital work.

The War Department has consistently supported the principle of civilian control of atomic energy in its broad aspects, and we look forward to a relationship with the Atomic Energy Commission that will be of mutual advantage. I want to pledge to Chairman Lilienthal, Doctor Bacher, Mr. Pike, Mr. Strauss, and Mr. Waymack the continuing wholehearted cooperation and support of the War Department.

The Commission is taking over a well organized and efficient activity. General Groves has maintained the Manhattan District in a state of readiness for transfer to the Commission, and he has directed its operations with an efficiency and effectiveness consistent with the highest ideals of the Service. I want to take this opportunity to pay tribute to him once more for his outstanding contribution to the security and welfare of the nation, and to commend him for his continuing devotion to duty in a position for which he has already been awarded the Army's highest award for this type of service, the Distinguished Service Medal.

END

DISTRIBUTION: Aa, Af, B, D (except Do), E, Ea, Ma, N, Sc, T.
10:00 A.M.

IMMEDIATE RELEASE

WAR DEPARTMENT
PUBLIC RELATIONS DIVISION
PRESS SECTION
TEL. RE 6700
BRS. 2528 AND 4860

December 31, 1946

BACKGROUND INFORMATION ON DEVELOPMENT OF ATOMIC ENERGY UNDER MANHATTAN PROJECT

Note to Press Representatives: For your convenience in preparing material dealing with the transfer of atomic energy facilities from the Manhattan Project to the Atomic Energy Commission, the significant events in the development of atomic energy, and other pertinent information are outlined herein.

1. On October 11, 1939, President Roosevelt appointed an "Advisory Committee on Uranium," following confirmation in the United States of the fission property of uranium, first reported from Europe. In 1940, Army and Navy funds were allotted for research work, and in June of that year the project was placed under the National Defense Research Council.

2. Dr. E. O. Lawrence of the Radiation Laboratory, University of California, reported, in May 1941, the discovery of plutonium and that plutonium probably would fission.

3. Review Committee of the Uranium Project reported favorably on the possibility of atomic bomb in November 1941 and the project was transferred to the Office of Scientific Research and Development, which in December 1941 recommended to President Roosevelt that the Army be brought into the project when full scale construction was ready to start. In June 1942 a special Engineer unit was created, known as the DSM Project (Development of Substitute Materials). This became the Manhattan Engineer District, formally established in August 1942. On September 17, 1942, Major General Leslie R. Groves (then Brigadier General) was placed in command.

4. At the time the Manhattan District was organized, the status of the Uranium Project was as follows:

a. It was known that uranium 235 would fission;
b. There were four methods which, theoretically, could be used to separate the fissionable U-235 from the unfissionable U-238:
(1) The electromagnetic process
(2) The thermal diffusion process
(3) The centrifuge process
(4) The gaseous diffusion process

MORE

It was not known which (if any) of these processes would prove feasible for large-scale operations;

c. It was known that uranium 238, while it would not fission, would, by neutron capture and two successive changes in atomic structure (emitting beta particles), become plutonium which would fission;

d. It appeared possible to produce plutonium on a large scale by using a uranium-graphite "pile" in which the U-235 maintained a controlled chain reaction, releasing neutrons which would impregnate the U-238 and thereby transmute that element into plutonium.

e. The scientific facts indicated that if enough U-235 or plutonium could be produced, an atomic bomb could be developed, and that this bomb would be many hundreds of times more powerful than a bomb using any known military explosive.

f. The means of accomplishing the explosion, once the material for the weapon was provided, had to be developed.

5. Between September 1942 and January 1, 1943, sites were selected and construction was started on the three main installations of the Manhattan District:

a. The Clinton Engineer Works, Oak Ridge, Tennessee, 60,000-acre site of the three main plants for separating U-235.

(1) The electromagnetic plant
(2) The gaseous diffusion plant
(3) The thermal diffusion plant

Oak Ridge is also the site of the Clinton Laboratory.

b. The Los Alamos Laboratory, 45,000-acre site of the bomb development laboratory, Los Alamos, New Mexico.

c. The Hanford Engineer Works, Richland, Washington, on the Columbia River, 400,000-acre site of the plants for the production of plutonium.

6. December 2, 1942, is recognized as the "significant anniversary" of the United States program of development of atomic energy. On that date, in a squash-rackets court beneath the West Stands of Stagg Field, Chicago, a group of scientists of the Metallurgical Laboratory, working under the direction of Dr. Enrico Fermi operated the first self-sustaining nuclear chain reactor. It was described by General Groves, when he suggested observation of that date, as the day "when man first released the energy of the atom and controlled it."

MORE

7. The electromagnetic plant for the concentration of U-235 started operating in October 1943 and in January 1944 began shipment of the material to Los Alamos. By the fall of 1944, the first piles were in operation at Hanford, and the gaseous diffusion and thermal diffusion plants at Oak Ridge were producing.

8. On July 16, 1945, the first bomb was exploded at the Alamogordo, New Mexico, test site, and the results reported to President Truman, then at Potsdam. On July 26, the Potsdam surrender ultimatum was delivered to Japan. It was answered on July 29 over Radio-Tokyo as "unworthy of public notice." Bombs were dropped on Hiroshima August 6, and on Nagasaki August 9. First surrender offers were received from Japan on August 10.

9. Publication of the "Smyth Report" (by Professor H. D. Smyth, Chairman, Department of Physics, Princeton University) shortly after the Hiroshima and Nagasaki bombings, revealed that the Manhattan District had spent nearly $2,000,000,000.00 of which nearly $1,500,000,000.00 was directly invested in physical facilities. At its peak of operations, nearly 500,000 people were employed on the operations sites and by the 200-odd prime contractors and the 5,000 subcontractors.

a. At Clinton Engineer Works over 200,000,000 board feet of lumber, nearly 400,000 cubic yards of concrete, over 50,000 tons of structural steel and over 50,000 tons of miscellaneous iron and steel were used. Over 300 miles of roads were built or improved and 55 miles of railroads were built. Population of Oak Ridge reached a peak of 78,000. Nearly 10,000 houses and apartments were constructed, dormitory space for 13,000 was provided, over 5,000 trailers were installed and over 16,000 hutments and barracks spaces were provided. A public library, hospital, 9 cafeterias, 5 restaurants, 3 lunchrooms, 13 supermarkets, 9 drugstores and 7 theaters were built.

b. At Hanford Engineer Works in Washington, excavation amounted to 25,000,000 cubic yards of earth (approximately 1/4 of the earth moved in the construction of the world's largest earth-fill dam, Fort Peck); a total of 40,000 car loads of materials were received (this is the equivalent of a train 333 miles long, more than the distance from Chicago to Louisville); more than 780,000 cubic yards of concrete were poured (enough to build a road 20 feet wide, 6 inches thick and 390 miles long), more than 11,000 poles were installed to carry power lines (enough for a single pole power line reaching from Chicago to St. Louis), more than 8,500 major pieces of equipment were used in constructing HEW, and approximately 345 miles of roads were constructed. Peak population was 45,000. Over 340,000,000 passenger miles of bus transportation were furnished during the construction period (this would provide transportation for 11,000 persons across the U. S.).

10. President Truman asked Congress for atomic energy control legislation on October 3, 1945, and on October 29 a special Senate Committee on Atomic

MORE

Energy was created. Hearings lasted from November until April. The Atomic Energy Act of 1946 was signed by the President on August 1, 1946, and the United States Atomic Energy Commission was appointed on October 28.

11. In November of 1945, President Truman, and the Prime Ministers of the United Kingdom and Canada announced agreement on principles of international control. This was endorsed by Russia in the Moscow Agreement announced December 27, 1945. The United Nations Atomic Energy Commission was established in January 1946 and, in March, the State Department's Committee on Atomic Energy submitted its report (Acheson-Lilienthal Report). On June 14, 1946, Bernard M. Baruch, U. S. Representative to the U. N. Atomic Energy Commission, presented proposals for international control based on the principles of the Acheson-Lilienthal Report.

12. Operations of the Manhattan District settled down quickly after V-J Day and by Spring of 1946 employment totals had shrunk below 50,000. By December 1946 total employment had been reduced to about 43,000, including 350 Army officers, 2000 enlisted men, 4000 government civilian employees, and about 37,000 employees of contract-operators.

13. Since the cessation of hostilities the Manhattan District (which with its Washington Headquarters and related staff sections and activities, is referred to as the Manhattan Project) has been maintained, with slight changes in organization, ready for transfer to the Atomic Energy Commission, the permanently responsible agency. Important peacetime programs were started, however, during the period between V-J Day and the passage of the Atomic Energy Act. These programs are outlined in the following paragraphs.

14. Research:

a. An Advisory Committee on Research and Development was named by General Groves in the fall of 1945 to make recommendations on general policies and specific research programs in nuclear science. This committee was composed of:

Dr. A. H. Compton, Chairman, Chancellor of Washington University, St. Louis.

Dr. R. F. Bacher of Cornell, now a member of the Atomic Energy Commission.

Dr. W. K. Lewis, Massachusetts Institute of Technology.
Lt. Col. J. R. Ruhoff, Manhattan District
Dr. Charles A. Thomas, Monsanto Chemical Company
Dr. R. C. Tolman of California Institute of Technology
Dr. J. A. Wheeler, Princeton University

MORE

b. The committee recommended the inclusion of a large number of specialized agencies in the development activities, with expansion aimed toward:

(1) Research and development in the production of fissionable materials and radioactive isotopes.
(2) Research and development for useful power from atomic energy.
(3) Acquisition of fundamental scientific information and expanding fundamental and applied research.
(4) Training of personnel in all branches of study associated with the field of nuclear science.

c. On the basis of these recommendations, the following programs have been followed in order to implement the broad plan:

(1) Establishment of regional national laboratories to provide government-owned facilities with wide participation by the qualified research agencies in each section of the country.
(2) Support of research projects at qualified industrial and university laboratories.
(3) Employment on contract basis of industrial organizations to carry out specific research assignments.
(4) Provision for the training of personnel of agencies participating in the program.
(5) Construction of piles for peacetime application.
(6) Production, allocation, and distribution of radioisotopes.
(7) Declassification of project information.
(8) Development of instruments.

15. Declassification:

a. A committee to recommend declassification policies and procedure was appointed in November 1945 composed of the following:

Dr. R. C. Tolman, Chairman, California Institute of Technology (now scientific adviser to Mr. Baruch).
Dr. A. H. Compton, Washington University, St. Louis.
Dr. R. F. Bacher, Cornell University
Dr. E. O. Lawrence, University of California
Dr. J. R. Oppenheimer, University of California
Dr. F. H. Spedding, Iowa State College
Dr. H. C. Urey, University of Chicago

b. This committee recommended policies which were followed with the establishment of an organization which has declassified about 600 documents.

MORE

16. In Line with the recommendations of the Advisory Committee on Research and Development, emphasis was placed on the production and distribution of radioactive isotopes for use in medical, biological and industrial research. On August 2, 1946 the first shipment of radioactive isotopes was made by the Manhattan District to Barnard Free Skin and Cancer Hospital, St. Louis, Missouri. To date, 255 shipments of these isotopes have been made.

17. The Manhattan District has awarded two prime contracts, one to Monsanto Chemical Company and the other to General Electric Company for studies of development of useful power from nuclear energy. Monsanto is carrying on research work in the design and construction of a power pile at Clinton Laboratory, Oak Ridge, Tennessee. The General Electric Company, which operates the Hanford Engineer Works, Richland, Washington, is working on several different designs of nuclear reactors for the generation of power. A government-owned atomic power laboratory is scheduled to be built at Schenectady, New York, for this work. The Argonne National Laboratory is also carrying on work on power production piles.

18. The first of a projected chain of National Laboratories was established July 1, 1946. This is the Argonne National Laboratory, Chicago, Illinois, successor to the wartime Metallurgical Laboratory of the Manhattan District. Twenty-five midwestern universities actively participate in the program and in the technical management of the laboratory. Other industrial and academic institutions may utilize the facilities of the laboratory for nuclear research.

Participating institutions of the Argonne National Laboratory are:

Battelle Memorial Institute
Carnegie Institute of Technology
Case School of Applied Science
University of Chicago
University of Cincinnati
Illinois Institute of Technology
Indiana University
Iowa State College
University of Illinois
University of Iowa
Mayo Foundation
Michigan State College
University of Michigan
University of Minnesota
University of Missouri
University of Nebraska
Northwestern University
Notre Dame University
Ohio State University
University of Pittsburgh
Purdue University
St. Louis University
Washington University (St. Louis)
Western Reserve University
University of Wisconsin

19. A contract was let in November 1946 to Hydrocarbon Research, Inc., for architectural and engineering services in the construction of the Brookhaven National Laboratory, Patchogue, Long Island, New York. The second national laboratory to be established for nuclear research, Brookhaven will be operated by a corporation formed by the nine participating universities in the northeast.

MORE

As in the case of Argonne, the facilities of the laboratory will be available to industrial and academic institution for nuclear research.

Members of Associated Universities, Inc., which operates the Brookhaven National Laboratory, are:

Columbia University	University of Pennsylvania
Cornell University	Princeton University
Harvard University	University of Rochester
Johns Hopkins University	Yale University
Massachusetts Institute of Technology	

20. The Knolls Atomic Power Laboratory, to be constructed at Schenectady, New York, will be operated by the General Electric Company under contract to the government. GE is prime contractor for design and construction. Work in this laboratory will include all phases of atomic power development.

21. Total value of research contracts, including funds firmly obligated and funds earmarked for projects continuing beyond current fiscal year, and including operating costs and estimated construction costs of existing and proposed research facilities, is approximately $75,000,000.

A partial list of agencies performing research work follows:

Argonne National Laboratory Chicago, Illinois	Broad Atomic research program, covering all phases of research in which 25 midwest universities participate.
Battelle Memorial Institute Columbus, Ohio	Development of metals for pile construction; studies of properties of metals under extreme temperatures.
Brookhaven National Laboratory Patchogue, Long Island, N. Y.	Planned construction of complete atomic research center to be operated by Associated Universities Inc., composed of nine major eastern universities.
Clinton Laboratory Oak Ridge, Tennessee	Operated by Monsanto Chemical Company, Production of isotopes; development of nuclear energy; process studies and construction of research facilities.
Columbia University New York City, New York	Fundamental nuclear research and medical studies; studies in nuclear physics.
General Electric Company Schenectady, New York	Extensive studies of development of nuclear energy.
Iowa State College Ames, Iowa	Metallurgical studies, with emphasis on purification processes.
Los Alamos Laboratory Los Alamos, New Mexico	Operated by University of California for broad physical, chemical and metallurgical research in field of military applications of nuclear energy.

MORE

Massachusetts Institute of Technology Boston, Massachusetts	Studies for development of pile construction materials; Metallurgical and ceramics research.
National Bureau of Standards Washington, D. C.	Engineering and Technical analysis service.
University of California Berkeley, California	Fundamental research in nuclear physics; properties of radioactive and fissionable materials.
University of Rochester Rochester, New York	Medical, biological, and health studies, including effect of radiation, shielding methods, and treatment of radiation damage.
University of Washington Seattle, Washington	Medical and biological studies.
Victoreen Instrument Company Chicago, Illinois	Development of instruments.
Washington University St. Louis, Missouri	Medical research and health service.

This list does not include a large number of research and industrial organizations participating in the program as subcontractors or cooperating with the several laboratories in specific research projects.

END

DISTRIBUTION: Aa, Af, B, D (except Do), E, Ea, Ma, N, Sc, T.
10:00 A.M.

IMMEDIATE **RELEASE**

WAR DEPARTMENT
PUBLIC RELATIONS DIVISION
PRESS SECTION
TEL. RE 6700
BRS. 2528 AND 4860

December 31, 1946

JOINT ANNOUNCEMENT BY U. S. ATOMIC ENERGY COMMISSION AND SECRETARY OF WAR ON TRANSFER OF MANHATTAN DISTRICT

The United States Atomic Energy Commission will take over the organization and facilities of the Manhattan Engineer District, War Department atomic development agency, at midnight tonight.

Under terms of the Atomic Energy Act and Executive Order of the President, and in accordance with agreements between the War Department and the Atomic Energy Commission, the Manhattan District will be taken over intact without interruption of present operations of the facilities or of current contractural arrangements.

Major General L. R. Groves will be relieved of all responsibility for the operations of the Project. At the request of the Commission all other military personnel will continue in their present assignments until reorganization of the agency, in accordance with the Act, is far enough advanced to enable the Commission to replace Army officers or to offer positions to non-regular Army personnel who desire to remain as civilians.

Personnel involved in the transfer includes 254 officers, of whom 76 are regular Army and 8 regular Navy, and 1688 enlisted men. There are about 3950 civilian employees of the government and 37,800 employees of contract operators. Total project personnel is 42892.

All civilian personnel of the Project will be transferred to the Commission, with no change in status.

Unexpended funds of the Manhattan Project will be transferred to the Commission under a schedule which will prevent delay in clearance of vouchers and insure prompt payment of all obligations. Operations of the facilities will continue in accordance with current plans.

The Act requires that the principal offices of the Commission be in Washington. The Commission does not anticipate any substantial transfer of personnel among the various installations or offices. Temporary Washington offices will be in the New War Department Building until such time as permanent quarters are available under government space assignment plans.

END

DISTRIBUTION: Aa, Af, B, D (except Do), E, Ea, Ma, N, Sc, T. 10:00 A.M.

IMMEDIATE **RELEASE**

WAR DEPARTMENT
PUBLIC RELATIONS DIVISION
PRESS SECTION
TEL. RE 6700
BRS. 2528 AND 4860

December 31, 1946

STATEMENT OF MEMBERS OF U. S. ATOMIC ENERGY COMMISSION ON TRANSFER OF MANHATTAN DISTRICT

The members of the United States Atomic Energy Commission welcome the opportunity to join Secretary of War Patterson in paying tribute to Major General L. R. Groves for his outstanding service to the country in directing the United States Atomic Energy program for four-and-a-half years.

General Groves has performed an unprecedented feat of organization and management. The Manhattan District organization, as he has pointed out, was an unbeatable combination of science, engineering, labor, and management, and he himself has described the accomplishments of the District as a triumph of ingenuity, energy, and teamwork. It was General Groves who put this organization together and who directed it through three years of herculean effort to a degree of success which made history.

Throughout the difficult months which followed V-J Day, when the contracting organizations, the scientists, the engineers, and executives wanted to return to their peacetime pursuits, General Groves has maintained an effective organization and has planned and carried out a constructive program for the peacetime utilization of atomic energy. In his work he has called on the leaders of many fields to advise and assist him.

As Commanding General of the Manhattan Project, General Groves has borne a responsibility not only unique for an Army officer but also vital to the security and welfare of the people of the United States. The Commission wants to express to General Groves its full acknowledgment of his great service to our country.

We want to express to the Secretary of War, to the Chief of Engineers, to General Groves, and to many others in the War Department our sincere appreciation for the excellent cooperation and assistance given us. We know that we can count on the efficiency and loyal devotion to duty of the personnel of the organization created by the War Department.

We are confident that in carrying out the program defined by Congress in the Atomic Energy Act, we will have the full cooperation of the War and Navy

MORE

Departments, of General Brereton and his committee, and of the other agencies of the Government concerned in the broad program. It is with full recognition of the immensity of our task that we accept from the Secretary of War and General Groves the responsibility for the operations of the Manhattan District.

END

DISTRIBUTION: Aa, Af, B, D (except Do), E, Ea, Ma, N, Sc, T.
10:00 A.M.