

SH-10261  
17 May 1948

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~~CONFIDENTIAL~~

MEMORANDUM FOR THE CHIEF, ARMED FORCES SPECIAL WEAPONS PROJECT:

Subject: Studies being made on the survivors of the atomic bombings in Japan.

Enclosure: Letter from Mr. Detlev W. Bronk, Chairman, National Research Council, to Joint Chiefs of Staff, dated 13 May 1948, with enclosures and tabs.

The enclosed letter with its enclosures and tabs is forwarded herewith as being a matter within the purview of the Armed Forces Special Weapons Project. The National Research Council has been informed that this correspondence has been forwarded to you.

*W. G. LALOR*  
W. G. LALOR,  
Captain, U. S. Navy,  
Secretary.

*Declassified pursuant  
to JCS 927/575  
8 Sept 1971*

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15 May 1946

SUBJECT: The Need for Continued Study of the Atomic Bomb  
Casualties in Japan.

TO: The Surgeon General  
U. S. Army  
Washington 25, D. C.

FROM: Joint Commission for Investigating the Effects  
of the Atomic Bomb in Japan.

1. The Joint Commission for Investigating the Effects of the Atomic Bomb in Japan has studied and recorded clinical and laboratory data on several thousand Japanese who were injured but survived the Atomic Bomb explosion in Hiroshima and Nagasaki. These data are filed in the Army Institute of Pathology.

2. While the immediate effects of the atomic bomb were devastating and of the greatest importance a study of the late effects may be of even more importance to Medical Science.

3. There exists a unique opportunity to make long term studies on the effect of an instantaneous dose of multimillion Volt X-rays on growth phenomena. There is every reason to believe that the carcinogenic effects of these X-rays as well as the flash burns are of the greatest importance.

4. In order that such investigations may be adequately pursued and controlled over a long period of time, it is urged that the National Research Council be requested to make recommendations for the planning and supervision of this project.

A. W. Oughterson  
Colonel, M. C.

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## RECOMMENDATIONS FOR CONTINUED STUDY

of the

## ATOMIC BOMB CASUALTIES

The medical surveys performed on atomic bomb casualties strongly indicate that a program of investigation should be continued for a long time to come.

The first essential of such a study is a registry of exposed individuals. This already has its nucleus in the 14,000 records of clinical and laboratory data prepared in the bombed cities by the Joint Commission for the investigation of the effects of the Atomic Bomb in Japan. These, together with the pertinent hematological and histological slides and specimens of autopsy and biopsy material, are now available in the files of the Army Institute of Pathology. Obviously, this registry should be greatly expanded to permit the continuous survey of a significant clinical population.

The second essential is the establishment of a permanent American Control Commission to pursue further studies. This has not as yet been accomplished. Such a commission is necessary since Japanese investigations now in progress and which will probably continue with the general approval of American GHQ in Tokyo, will in all likelihood still suffer from the lack of central planning and particularly from the effects of regional and factional jealousies prevalent in Japanese universities. By this statement no belittling is implied of the excellent investigations that have been carried out by individual Japanese investigators. An American Commission under continuous control of a permanent body such as the National Research Council could direct and obtain experience for coordinated studies for many years to come and maintain the necessary registry. In this work the continued cooperation of the Japanese National Research Council, which is supervising the work there, could be maintained to facilitate the work as it willingly has in the past.

Subjects that seem at present to merit investigation are the following:

1. Hematologic studies. Follow-up studies are particularly desirable of individuals in the Nishiyama area of Nagasaki who, some months after exposure to the atomic bomb, have shown an apparently significant leukocytosis. This is particularly interesting since leukemia may develop after total body irradiation in animals. Also sarcomas of bone have been observed in man after the ingestion of radioactive materials.
2. Studies in the sexual sphere.
  - a. Records of sperm counts are available in approximately 100 individuals, many of whom have shown striking reductions in the counts and in some instances azoospermia. All cases who were within 1,000 meters of the bombing and who have come to autopsy have shown atrophy of the testes. Follow-up studies are obviously necessary in the survivors.
  - b. Further investigation of the menstrual history of the exposed individuals in whom there has been a high incidence of amenorrhoea. Some 20 endometrial biopsies have been obtained,

ARMY SERVICE FORCES  
Office of the Surgeon General  
Washington 25, D. C.

In Reply Refer to  
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28 May 1946

Dr. Lewis H. Weed  
Chairman, Division of Medical Sciences  
National Research Council  
2101 Constitution Avenue  
Washington 25, D. C.

Dear Doctor Weed:

I am inclosing for your consideration a letter from Colonel A. W. Oughterson, MC, transmitting recommendations relating to the continued study of atomic bomb casualties.

It will be appreciated if you will present this subject to any selected group of your organization. It seems to me highly important that there be careful follow-up of these cases and obviously the plan for the follow-up must be so carefully drawn that the results will take adequate advantage of the opportunity for study. I realize that difficulties will be encountered in implementing a plan but I do not feel that these will prove insurmountable.

It is hoped that this matter will receive early attention. Your comments and recommendations are requested with specific reference to the desirability and probable duration of studies, the personnel and facilities necessary for their execution, and the auspices under which the study group might operate. This latter point is probably the most difficult to solve.

Sincerely yours,

NORMAN T. KIRK  
Major General  
The Surgeon General

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YDEPARTMENT OF THE NAVY  
Bureau of Medicine & Surgery  
Washington 25, D.C.BUMED-X-BLK:II  
A16-3/NN

24 July 1946

Dr. Lewis H. Weed  
Chairman, Division of Medical Sciences  
National Research Council  
2101 Constitution Avenue, N.W.  
Washington 25, D. C.

My dear Doctor Weed:

In response to your letter of 28 June 1946 regarding continuance of the studies on atomic bomb casualties in Japan, I wish to pledge the whole hearted interest and support of the Bureau of Medicine and Surgery in any way possible.

It is considered that stimulation of the immediate program of study must be effected by whatever means may be at our command and that plans must be formulated for instrumentation of observation over a period of years as yet indeterminable.

For implementation of the study's immediate continuance it is highly desirable that the facilities of the Division of Medical Sciences, National Research Council be utilized and that studies of the atomic bomb casualties be considered a part of the National Research Council's overall contract for services. In accordance therewith it is requested that an immediate continuing Council committee be formed to function on this subject as outlined in your letter or as later may be determined by circumstance to be most appropriate.

In this regard and for your information I am enclosing a copy of a memorandum from Captain Shields Warren dated 11 January 1946, subject, "Recommendation for Survey of Atomic Bomb Victims in October 1946." As you know, Dr. Warren is currently occupied in observations on "Crossroads" project. It is anticipated that upon his return in September he will feel compelled to resume his duties at Harvard University, but should he desire to conduct a re-survey as outlined or as might be determined upon by the Council committee, this Bureau would be pleased for him so to serve, but only at his own request.

It is believed that a long range study of atomic bomb effects can best be implemented through a Presidential Directive instructing employment of the facilities of the National Research Council rather than by a commission having representation of the Surgeons General due to the relatively more permanent status of personnel of the National Research Council.

Accordingly a letter is in preparation addressing the Secretary of the Navy and outlining the need for a continuation of atomic bomb casualty studies, pointing out that such a study is beyond the scope of military and naval affairs but involving mankind in general both in war and in anticipated problems of peace. The Secretary

Bureau of Medicine and Surgery

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will be requested to take appropriate action toward the evolution of a Presidential Directive instructing the National Academy of Sciences, National Research Council, to undertake a long range continuing study of the biological and medical effects of the atomic bomb, and authorizing the Council to utilize the aid as required of governmental and civilian agencies and personnel.

It is felt that you and the Division of Medical Sciences, National Research Council, are to be commended in your leadership in and analysis of this pressing problem.

Sincerely yours,

ROSS T. McINTIRE  
Vice Admiral (MC)  
Surgeon General, U.S. Navy

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YWAR DEPARTMENT  
Office of The Surgeon General  
Washington 25, D. C.In reply refer to MEDDH  
700.2(Japan)F

26 July 1946

Lewis H. Weed, M.D.  
Chairman, Division of Medical Sciences  
National Research Council  
2101 Constitution Avenue, N.W.  
Washington 25, D. C.

Dear Doctor Weed:

I have given careful consideration to your letter of 28 June 1946, which constituted in effect a report of the conference group who considered the matter of continuing study of atomic bomb casualties in Japan. I wish to express my appreciation for the expeditious manner in which this matter was handled and my general concurrence in the proposed approach to the problem.

I have requested necessary War Department concurrences and clearances for the dispatch of two civilian consultants to Japan for the purpose of making a preliminary investigation, stimulating Japanese workers as much as possible, and making recommendations regarding future studies.

It is my hope that the necessary clearances will be obtained, although this may require some time. Meanwhile, I would appreciate it very much if you would be willing to nominate or suggest the names of two or possibly three scientists whom you would regard as appropriate choices for this assignment and who you feel might be willing to accept it. Final commitment, of course, would have to be withheld, but some time might be saved by approaching them and possibly even processing their papers as consultants while awaiting clearance from the Pacific Area.

Sincerely yours,

NORMAN T. KIRK  
Major General  
The Surgeon General

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DEPARTMENT OF THE NAVY  
BUREAU OF MEDICINE & SURGERY  
Washington 25, D.C.

BUMED-X-0A

1 Aug 1946

Dr. Lewis H. Weed  
Chairman, Division of  
Medical Sciences, NRC  
2101 Constitution Avenue  
Washington 25, D. C.

My dear Doctor Weed:

I am forwarding for your information a copy of  
the Surgeon General's letter to The Secretary of the Navy  
in which he recommends issuance of a Presidential Directive  
instructing the National Academy of Sciences, National Research  
Council to institute a long range, continuing study of the  
biological and medical effects of the atomic bomb.

Yours sincerely,

/s/ W.W. Hall

W.W. HALL  
Captain (MC) USN  
Chief of Research Division



WAR DEPARTMENT  
OFFICE OF THE SURGEON GENERAL  
WASHINGTON 25, D. C.

IN REPLY REFER TO MEDDH

4 September 1946

700.2 ( Japan ) F

Dr. Lewis H. Weed, Chairman  
Division of Medical Sciences  
National Research Council  
2101 Constitution Avenue, N.W.  
Washington, D. C.

Dear Dr. Weed:

This letter follows your communication of 9 August 1946 in which you suggested a list of individuals from which selection might be made of civilian consultants to Japan for study of atomic bomb casualties.

I have delayed acting on this letter until assured of War Department approval of the project. Such approval has now been obtained and all that remains to be accomplished from a strictly official standpoint is to secure clearance from the Commander in Chief, Army Forces, Pacific. The War Department will request and doubtless will obtain clearance as soon as firm nominations of two individuals can be made. Pursuant to your letter of 26 July 1946, my office this date issued invitations to Austin M. Brues, MD, and Raymond E. Zirkle, PhD. If they accept, they will be nominated to the War Department.

Assuming that Drs. Brues and Zirkle do accept, it is still difficult to estimate the exact time required to obtain clearance from the Pacific, process their papers as consultants, and arrange travel priorities. These steps will be expedited as much as possible, and 3 - 4 weeks may suffice. It would seem to me essential that during that time Drs. Brues and Zirkle receive thorough briefings as to their exact mission. I shall appreciate any arrangements which you may deem proper to attain that end. Consideration might be given to scheduling an early meeting of the committee proposed by Vice Admiral Ross T. McIntire in his letter to you of 24 July 46.

Sincerely yours,

/s/R. W. BLISS  
R. W. BLISS  
Brig. General, USA  
Deputy Surgeon General

## WAR DEPARTMENT

RGP/vv

MEDDH

4 September 1946

Vice Admiral Ross T. McIntire, Chief  
Bureau of Medicine and Surgery  
U. S. Navy  
Washington 25, D. C.

Dear Admiral McIntire:

Reference is made to the enclosed letters of 28 June 46 and 9 August 46 from Dr. Lewis H. Weed, Chairman, Division of Medical Sciences, National Research Council.

Subsequent to receipt of these letters the following steps have been accomplished:

1. The Manhattan Engineering District has concurred in, and the War Department has approved the proposal that two civilian consultants be dispatched to Japan for study of atomic bomb casualties.

2. Invitations have been extended to Austin M. Brues, MD, and Raymond E. Zirkle, PhD, to accept appointments as consultants to the Secretary of War and assignments to temporary station in Japan.

Dr. Weed has indicated that acceptance by these two individuals may be anticipated. Upon receipt of their statements of willingness, firm nominations will be made to the War Department and clearances requested from the Commander in Chief, Army Forces, Pacific. It seems practically certain that clearances will be forthcoming.

I have suggested to Dr. Weed that he arrange for a meeting of the National Research Council Committee on Atomic Casualties proposed in your letter to him of 24 July. It would seem essential that Drs. Brues and Zirkle be thoroughly briefed as to their exact mission and that such briefing might require attendance by representatives of several fields of interest. Captain Shields Warren (MC) USNR, would be an invaluable contributor to such a meeting. In this connection, he of course also would have been an ideal selection as one of the group to resurvey atomic casualties in Japan, but from your letter of 24 July I gathered that you thought it extremely unlikely that he would be available for this assignment. If such assumption is incorrect, I should be very glad to take any steps either to assist in adding him to the group to be dispatched or in substituting him for either Dr. Brues or Dr. Zirkle.

MEDDH/AdmRossTMCIntire, 4Sep46/continued

Our interests in the medical aspects of atomic energy, of course, are mutual, and I shall welcome any suggestions which you may care to offer, both with reference to immediate and long range actions. In the latter connection, I am thoroughly in accord with your views that the National Academy of Sciences - National Research Council, should undertake the long range continued study of the biological and medical effects of the atomic bomb.

Sincerely yours,

2 Incls  
#1-ltr 28 June 46  
#2- " 9 Aug 46

R. W. Bliss  
Brig. General, USA  
Deputy Surgeon General

cc: Dr Weed

WILLIAM S STONE  
Colonel, M C  
Chairman, Army Medical Research  
& Devel Bd

REPRODUCED AT THE NATIONAL ARCHIVES  
DEPARTMENT OF THE NAVY  
OFFICE OF THE SECRETARY  
WASHINGTON

18 NOV 1946

RECEIVED

The President  
The White House

Dear Mr. President:

At the earliest practicable date following the capitulation of Japan, scientific groups effected a survey of damage produced by the atomic bombs on Hiroshima and Nagasaki. Medical scientists studied the effect on personnel. These observations were conducted under the auspices of the Army and Navy through the agencies of the Manhattan District and the Naval Technical Mission in Japan.

Preliminary surveys involve about 14,000 Japanese who were exposed to the radiation of atomic fission. It is considered that the group and others yet to be identified offer a unique opportunity for the study of the medical and biological effects of radiation which is of utmost importance to the United States. Such a study should continue for a span of time as yet undeterminable. However, the study is beyond the scope of military and naval affairs, involving as it does humanity in general, not only in war but in anticipated problems of peaceful industry and agriculture. In addition, demobilization and consequent loss of military scientific personnel engaged in this study prevent its continuation.

In order that the studies might be followed to their logical conclusion, a conference group of the Division of Medical Sciences, National Research Council, convened to discuss the problem. The group recommended that appropriate action be taken toward the evolution of a Presidential Directive to effect the study. The recommendation with which the Surgeon General of the Navy, the Vice Chief of Naval Operations, and the Chief of Naval Research concur is as follows:

"That the Presidential Directive instruct the National Academy of Sciences - National Research Council - to undertake a long range, continuing study of the biological and medical effects of the atomic bomb on man. That in this directive the council be authorized to enlist the aid of governmental agencies and personnel, and such civilian agencies and personnel as may be needed. Further, that those governmental agencies whose aid is requested by the Council be authorized and requested to provide the needed cooperation."

In view of the above, it is respectfully recommended that the National Academy of Sciences - National Research Council - be so directed.

Sincerely yours,

James Forestal

Approved

*[Signature]*

November 26, 1946

WAR DEPARTMENT  
Washington, D. C.

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5 March 1947

Dr. Frank B. Jewett, President  
National Academy of Sciences  
2101 Constitution Avenue  
Washington, D. C.

Dear Doctor Jewett:

Your letter of February 13, 1947, requesting assistance and aid from the War Department in connection with your organization's activities in Japan on follow-up studies of atomic bomb casualties has been received.

Because of the large number of governmental agencies making requests on the War Department for this type of assistance, it has been necessary to formulate a restrictive policy on the furnishings of supplies and services in overseas theaters to these agencies. It is, under this policy, the prerogative of the Theater Commander to determine whether he is able to furnish such supplies and services without interfering with his military mission when the agencies involved relate to military purposes.

The War Department views your project as one of military importance and as having military implications. It, therefore, will advise the Commanding General, Far East, to give your commission representatives such support as possible under the provisions of the policy outlined above during a reasonable period required by your organization to become established on an independent basis.

I must advise you, however, that due to its own limitations, the War Department cannot guarantee supplies and services to any other governmental agencies for an extended period of time. Thus, in connection with establishment of permanent machinery for long-range studies, your organization must contemplate operating without War Department Aid.

I regret I am unable to give you more definite assurance of support.

Sincerely yours,

/s/ Robert P. Patterson  
Secretary of War

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March 11, 1947

Honorable Robert P. Patterson  
Secretary of War  
Washington, D. C.

My dear Mr. Patterson:

Thanks for your letter of March 5, in reply to mine of February 13 re a continuing study of the biological and medical effects of the atomic bomb on man.

We are glad to have the offer of cooperation by the War Department during the present period, without which it would be difficult if not impossible for the National Academy-Research Council to operate the project.

Sincerely yours,

Frank B. Jewett  
President

cc: Dr. Weed (Dr. Owen)

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MEDDH

28 April 1947

Dr. Lewis H. Weed, Chairman  
Division of Medical Sciences  
National Research Council  
2101 Constitution Avenue  
Washington 25, D. C.

Dear Doctor Weed:

I am glad to learn from your letter of 25 April that the Division of Medical Sciences, National Research Council, will propose that the Atomic Energy Commission enter into contract with the National Academy-Research Council for financing of the activities of the Council's Committee on Atomic Casualties.

As this committee of the Council was appointed in response to the Presidential Directive of November 26, 1946 which derived from initial steps taken by me a year ago, the Medical Department of the Army is, of course, greatly interested in the Committee's program of long-term study of the atomic effects on the Japanese. The entire undertaking has my full support, as accurate data regarding the medical and biological effects of the atomic bombs on man must be obtained. A unique opportunity for acquirement of scientific information has been afforded and I feel sure that through the Council's civilian group effective leadership will be provided. The administrative organization within the Council seems to me to offer possibility of close cooperation between outstanding civilian medical scientists and those in the federal services.

I heartily approve the suggestion that the Atomic Energy Commission enter into contract with the Academy-Council for the needed financial subvention of this entire enterprise. I can assure you of the full cooperation of the Medical Department of the Army, and I feel that the proposed plan will enable officers in my service to be fully cognizant of the radiation effects on man. I am sure that correlated studies made by medical officers in the Army and by the civilians on this important problem will go forward with the same accord as in the past.

Sincerely yours,

NORMAN T. KIRK  
Major General  
The Surgeon General

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A16-3/NN

Washington 25, D. C.

1 May 1947

Dr. Lewis H. Weed, Chairman  
Division of Medical Sciences  
National Research Council  
2101 Constitution Avenue  
Washington 25, D. C.

Dear Doctor Weed:

I have learned that the Division of Medical Sciences, National Research Council, is about to propose that the Atomic Energy Commission arrange financing of the activities of the Council's Committee on Atomic Casualties. As this committee of the Council was established by Presidential Directive, on recommendation of the Secretary of the Navy, the Medical Department of the Navy has of course been vitally interested in the initial steps taken by the committee in its program of long-term study of the atomic effects on the Japanese at Nagasaki and Hiroshima.

The whole enterprise has my enthusiastic support as I feel every effort should be made over the years to obtain accurate information regarding the biological and medical effects of the atomic bombs on man. A unique opportunity for advance of medical knowledge has been afforded and I am confident that the civilian group, appointed by the Council, will provide the effective leadership needed for the long-continued study on the Japanese.

I hope that the Atomic Energy Commission will see its way clear to arrange the necessary adequate financial support for this important undertaking. The full cooperation of the Medical Department of the Navy is assured as the Department must necessarily be fully informed of all phases of the medical and biological effects of atomic energy on man. I can assure you of my desire to have the Medical Department of the Navy participate in the important endeavor.

Sincerely yours,

/s/ C. A. SWANSON  
Rear Admiral, MC  
Surgeon General, U. S. Navy

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WAR DEPARTMENT  
Office of The Surgeon General  
Washington 25, D. C.

In reply refer to MEDDH 080 (Atomic Energy Commission)T

19 May 1947

Dr. Lewis H. Weed, Chairman  
Division of Medical Sciences  
National Research Council  
2101 Constitution Avenue  
Washington 25, D. C.

Dear Doctor Weed:

In reference to General Kirk's letter from this office dated 28 April 1947 concerning the research work to be undertaken by the Committee on Atomic Casualties, you may recall we recommended that the research work involved should have the financial backing of the Atomic Energy Commission. In making this statement we failed to qualify it by informing you that no funds were available to the Medical Department of the Army for the proposed studies on follow-up of atomic bomb casualties in Japan.

We trust that this statement will be adequate for presentation to the Atomic Energy Commission and that it will be possible for you to gain such financial support as may be required.

Sincerely yours,

/s/ William S. Stone  
WILLIAM S. STONE  
Colonel, Medical Corps  
Chairman, Army Medical Research  
and Development Board

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Department of the Navy  
Bureau of Medicine & Surgery  
Washington 25, D. C.

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23 May 1947

Dr. Lewis H. WEED, Chairman  
Division of Medical Sciences  
National Research Council  
2101 Constitution Avenue  
Washington 25, D. C.

Dear Doctor Weed:

In order to amplify the Surgeon General's letter of 1 May 1947 relating to cooperation by the Medical Department of the Navy in the matter of the National Research Council's Committee on Atomic Casualties, it is necessary to bear in mind that we lack funds which may be expended for that purpose.

Accordingly, our cooperation is subject to that particular limitation but will be available in fullest possible measure otherwise.

Sincerely yours,

/s/ C. A. SWANSON  
Rear Admiral, MC, U.S. Navy  
Chief of Bureau

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YHEADQUARTERS, ARMY AIR FORCES  
Washington

11 August 1947

Dr. Lewis H. Weed  
Chairman, Division of the Medical Sciences  
National Research Council  
2101 Constitution Avenue  
Washington 25, D. C.

Dear Dr. Weed:

It has come to the attention of this Headquarters that a Committee on Atomic Casualties exists in the Division of the Medical Sciences of the National Research Council. This activity is of great interest to the United States Air Forces and it is considered desirable to have an U.S.A.F. Medical Officer assigned as Liaison Member. The name of Colonel Otis O. Benson, Jr. M.C., is submitted for consideration as the U.S.A.F. nominee. This officer has been cleared to receive classified information on radiobiological subjects.

Sincerely yours,

/s/ Curtis E. LeMay

CURTIS E. LeMAY  
Major General, U. S. Army  
Deputy Chief of Air Staff for  
Research and Development

Contract No. At-49-1-Gen-72

THIS CONTRACT, entered into this 13 day of ~~March~~<sup>April</sup> 1948, effective as of the 1st day of July, 1947, by the United States of America, represented by the United States Atomic Energy Commission (hereinafter called the Commission) and the National Academy of Sciences (hereinafter called the Contractor), a non-profit corporation organized under an Act of Congress of March 3, 1863, 12 Stat. 806.

WITNESSETH THAT:

WHEREAS, on November 26, 1946, the President of the United States approved a recommendation by the Secretary of the Navy that the Contractor undertake a long-range continuing study of the biological and medical effects of the atomic bomb on man, with needed cooperation from government agencies; and

WHEREAS, a letter contract effective as of July 1, 1947, which is hereby superseded, was entered into between the Commission and the Contractor, in which it was agreed that negotiations should be undertaken for the execution of a definitive contract; and

WHEREAS, this contract is negotiated under the Atomic Energy Act of 1946, in the interest of the common defense and security;

NOW THEREFORE, the parties hereto mutually agree as follows:

ARTICLE I: SCOPE OF WORK

The Contractor shall make studies and conduct research and experimental investigations, primarily in Japan, in accordance with general programs from time to time approved by the Commission. This

shall include investigations of the physiological and biological effects of radiation, and such other work as may be necessary or proper to the carrying out of such studies, research and investigation, and also the compilation and dissemination of reports relating thereto.

ARTICLE II: SUBCONTRACTS

The Contractor is authorized to enter into subcontracts for the performance of any part of the work under this contract, Provided, That any program which involves the construction of buildings or other physical facilities at a cost in excess of \$5,000 shall be submitted to the Commission for approval before any subcontracts shall be let.

ARTICLE III: TERM OF WORK

(a) The term of this contract shall begin on July 1, 1947 and continue through June 30, 1949, and may thereafter be extended as agreed upon by the Commission and the Contractor. The Commission, by written notice, may terminate the contract in whole or in part at any time.

(b) In view of the fact that most of the work under this contract is to be performed overseas, the Contractor is authorized to make commitments to personnel extending for such periods beyond the term of this contract as the Contractor may deem necessary. The commitments for such purpose beyond June 30, 1949 (or such further date to which the contract may be extended) shall not exceed \$350,000.00, and the Contractor shall be reimbursed to the extent of expenditures actually incurred thereby.

ARTICLE IV: REIMBURSEMENT FOR COSTS

(a) The Government shall reimburse the Contractor for all direct and indirect costs, determined in accordance with generally accepted accounting principles consistently applied, which are actually incurred by the Contractor in performing the work under this contract. These costs shall include the following:

(1) expenditures for overhead, salaries, wages, subsistence or per diem in lieu thereof, services, supplies, taxes, premiums for such bonds or insurance as the Commission may require or approve, transportation and communication, equipment and apparatus, and any other cost which the Commission may approve or ratify;

(2) any other costs and expenses not otherwise reimbursed, which are actually incurred by the Contractor in good faith arising out of or connected with the work under this contract. Any cost or expense actually incurred and claimed by the Contractor under this paragraph (a)(2) of Article IV shall be reimbursed by the Government unless the Commission shall establish that such cost or expense resulted from wilful misconduct or bad faith on the part of some corporate officer or officers of the Contractor, or on the part of a person having general supervision over the work carried on under this contract. Any dispute as to whether such an item is reimbursable shall be determined pursuant to Article VIII, Disputes, which determination shall be binding on the Contractor and the Government. The total amount of reimbursement under this paragraph (a) of Article IV shall be not in excess

of \$1,850,000.00, to be a charge upon such obligational authority as the Commission may designate.

(b) In addition to the amounts payable in accordance with paragraph (a) of this Article the Government shall further reimburse the Contractor, in an amount not to exceed \$350,000.00, for any expenditures actually incurred by the Contractor pursuant to paragraph (b) of Article III.

(c) In the event that this contract is terminated by the Commission, the termination shall be carried out in a manner to be directed by the Commission, and the Government shall further reimburse the Contractor, in addition to the amounts payable under paragraphs (a) and (b) of this Article, for the costs resulting from the termination.

(d) Reimbursement under the foregoing provisions shall be without duplication of any items.

(e) Any revenues received by the Contractor in connection with work under this contract shall be accounted for by the Contractor and applied by the Contractor in reduction of the cost of work under the contract.

#### ARTICLE V: PARTIAL AND ADVANCE PAYMENTS

(a) Partial and advance payments on account of costs including overhead may be made by the Commission upon application of the Contractor, but the amount of outstanding advances shall not as a general rule exceed the estimated requirements for the next three months operations. Advances shall be deposited only with banks which are members of the Federal Reserve System or which have been approved by the Commission.

(b) At such intervals as shall be mutually agreed upon, but not less often than once a year, the Commission, in consultation with the Contractor, shall review in accordance with generally accepted accounting principles consistently applied the amount of costs including overhead actually incurred by the Contractor in the performance of the work during the preceding interval. Any excess of payments on account of costs above actual costs including overhead for the same period shall be applied by the Contractor in reduction of the cost of work under this contract or, if the Commission so directs, refunded promptly to the Government. Any deficit in payments to the Contractor shall be paid promptly to the Contractor by the Government.

ARTICLE VI: TITLE TO AND DISPOSITION OF PROPERTY

(a) Except as otherwise directed by the Commission, title to all property purchased by the Contractor, for which the Contractor shall be reimbursed or entitled to reimbursement under this contract, shall vest in the Government when title passes from the vendor.

(b) The Contractor shall not be liable for the loss or destruction of or damage to such property unless the Commission shall establish that such loss, destruction, or damage resulted from the wilful misconduct or bad faith of a corporate officer or officers of the Contractor, or of a person having general supervision over the work carried on under this contract.

(c) Within a reasonable time after the termination of this contract, the Contractor shall render, in accordance with procedures agreed upon by the parties, an accounting of all property not theretofore expended in performance of the contract.

(d) Unless otherwise directed by the Commission, the Contractor may sell or retain any such property upon application of the proceeds of sale or the fair value thereof (to be determined according to procedures agreed upon between the Commission and the Contractor) in reduction of the costs under the contract.

ARTICLE VII: RECORDS, INSPECTIONS AND REPORTS

(a) The Contractor shall maintain such accounting and property records as the Commission may require or approve.

(b) The Commission may inspect such records, and may also inspect all activities, facilities, and equipment relating to work under this contract.

(c) The Contractor shall make such reports concerning its activities and progress under this contract as the Commission may from time to time require.

ARTICLE VIII: DISPUTES

All disputes which may arise under this contract, and which are not disposed of by mutual agreement, shall be decided by the representative of the Commission duly authorized to supervise and administer performance of the work under this contract, who shall reduce his decision to writing and mail a copy thereof to the Contractor at its address shown herein. Within thirty days from receipt of such notice, the Contractor may appeal in writing to the Commission, whose written decision or that of its other designated representative or representatives or board thereon shall be final and conclusive. Pending decision of a dispute the Contractor shall diligently proceed with the performance of this contract.

ARTICLE IX: DISCLOSURE OF INFORMATION

(a) It is understood that disclosure of classified information relating to the work under this contract to any person not entitled to receive it, or failure to safeguard all top secret, secret, confidential and restricted matter that may come to the Contractor or any person under its control in connection with the work under this contract, may subject the Contractor, its agents, employees and subcontractors to criminal liability under the laws of the United States. See the Atomic Energy Act of 1946 (Public Law 585 - 79th Congress). See also Title I of an Act approved June 15, 1917 (40 Stat. 217; 50 U.S.C. 31-42), as amended by an Act approved March 28, 1940 (54 Stat. 79); and the provisions of an Act approved January 12, 1938 (52 Stat. 3; 50 U.S.C. 45-45d) as supplemented by Executive Order No. 8381, dated March 22, 1940, 5 F. R. 1147.

(b) The Contractor agrees to conform to all security regulations and requirements of the Commission. Except as the Commission may authorize in accordance with the provisions of the Atomic Energy Act of 1946, the Contractor agrees not to permit any individual to have access to restricted data until the Federal Bureau of Investigation shall have made an investigation and report to the Commission on the character, associations, and loyalty of such individual and the Commission shall have determined that permitting such person to have access to restricted data will not endanger the common defense or security. The term "restricted data" as used in this paragraph means all data concerning the manufacture or utilization of atomic weapons, the production of fissionable material, or the use of fissionable material

to and rights under any application or patent that may result. The judgment of the Commission on these matters shall be accepted as final; and the Contractor, for itself and for its employees, agrees that the inventor or inventors will execute all documents and do all things necessary or proper to carry out the judgment of the Commission.

(b) No claim for pecuniary award under the provisions of the Atomic Energy Act of 1946 shall be asserted by the Contractor or its employees with respect to any invention or discovery made or conceived in the course of any of the work under this contract.

(c) Except as otherwise authorized in writing by the Commission, the Contractor will obtain patent agreements to effectuate the purposes of paragraphs (a) and (b) of this Article from all persons who perform any part of the work under this contract, except clerical and manual labor personnel who will not have access to technical data.

(d) Except as otherwise authorized in writing by the Commission, the Contractor will insert in all subcontracts provisions making paragraphs (a), (b), and (c) of this Article applicable to the subcontractor and its employees.

#### ARTICLE XI: SAFETY AND ACCIDENT PREVENTION

The Contractor shall initiate and take all reasonable steps and precautions to protect health and minimize danger from all hazards to life and property, and shall make all reports and permit all inspections as required by the Commission and shall conform to all minimum health and safety regulations and requirements of the Commission.

ARTICLE XII: ASSIGNMENT OR TRANSFER

Neither this contract, nor any interest or claim relating to this contract, shall be assigned or transferred, except with the prior approval of the Commission in writing.

ARTICLE XIII: EIGHT HOUR LAW

(a) No laborer or mechanic doing any part of the work contemplated by this contract, in the employ of the Contractor or any subcontractor contracting for any part of said work contemplated shall be required or permitted to work more than 8 hours in any one calendar day upon such work at the site thereof, except upon the condition that compensation is paid to such laborer or mechanic in accordance with the provisions of this paragraph. The wages of every laborer and mechanic employed by the Contractor or any subcontractor engaged in the performance of this contract shall be computed on a basic day rate of 8 hours per day and work in excess of 8 hours per day is permitted only upon the condition that every such laborer and mechanic shall be compensated for all hours worked in excess of 8 hours per day at not less than one and one-half (1-1/2) times the basic rate of pay. For each violation of the requirements of this paragraph a penalty of Five Dollars (\$5.00) shall be imposed upon the Contractor for each laborer or mechanic for every calendar day in which he shall be required or permitted to labor more than 8 hours upon said work without receiving compensation computed in accordance with this paragraph, and all penalties thus imposed shall be withheld for the use and benefit of the Government, Provided: that this stipulation shall be subject in all respects to the exceptions provided by law.

(b) This Article shall be applicable to the extent provided by law.

ARTICLE XIV: ANTI-DISCRIMINATION

(a) The Contractor, in performing the work required hereunder shall not discriminate against any employee or applicant for employment because of race, creed, color or national origin.

(b) The Contractor agrees that the provision of paragraph (a) above will be inserted in all of its subcontracts. For the purpose of this Article, a subcontract is defined as any contract entered into by the Contractor with any individual, partnership, association, corporation, estate or trust or other business enterprise or ~~local~~ <sup>legal</sup> entity, for the performance of a specific part of the work to be performed in connection with the services furnished under this contract; Provided, however, that a contract for the furnishing of standard or commercial articles or raw materials shall not be construed as a subcontract.

*a.m.R.*

(c) This Article shall be applicable to the extent provided by law.

ARTICLE XV: OFFICIALS NOT TO BENEFIT

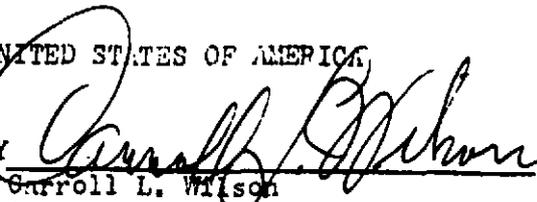
No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE IV: DEFINITIONS

The term "Commission" as used in this contract means the United States Atomic Energy Commission or its duly authorized representative or representatives.

UNITED STATES OF AMERICA

BY



Carroll L. Wilson  
General Manager  
United States Atomic  
Energy Commission

National Academy of Sciences

BY



Alfred N. Richards

Title

President

in the production of power, but shall not include any data which the Commission from time to time determines may be published without adversely affecting the common defense and security.

(c) Except as otherwise directed by the Commission, the Contractor shall insert provisions similar to paragraphs (a) and (b) of this Article in all subcontracts under this contract.

(d) It is expected that the work under this contract will, to a large extent, not involve "restricted data". It is the intention of the Commission to examine the program to be undertaken by the Contractor in an effort to identify those portions of the work which are not expected to involve "restricted data" and to authorize the Contractor to perform such portions as unclassified work. It is understood, however, that when in the course of such unclassified work any discoveries are made or any data are used or developed that constitute "restricted data", the Contractor shall promptly inform the Commission and shall classify and safeguard all such discoveries or data in accordance with the requirements of the Commission. In the event doubt exists as to whether any data used or developed constitutes "Restricted Data", the Contractor shall consult the Commission prior to releasing any such data.

ARTICLE X: PATENTS

(a) Whenever any patentable invention or discovery is made or conceived by the Contractor or its employees in the course of any of the work under this contract, the Contractor shall furnish the Commission with complete information thereon; and the Commission shall have the sole power to determine whether or not and where a patent application shall be filed, and to determine the disposition of the title

## NATIONAL RESEARCH COUNCIL

2101 CONSTITUTION AVENUE, WASHINGTON 25, D. C.

Established in 1916 by the National Academy of Sciences under its Congressional  
Charter and organized with the cooperation of the National Scientific  
and Technical Societies of the United States

13 May 1948

Joint Chiefs of Staff  
Department of National Defense  
Washington 25, D. C.

ATTENTION: The Secretary  
Joint Chiefs of Staff

Gentlemen:

The National Research Council requests that you reaffirm the interest of the National Defense Establishment in the studies being made on the survivors of the atomic bombings in Japan by the Atomic Bomb Casualty Commission, the Field Agency of the Council's Committee on Atomic Casualties, and that this expression of interest be transmitted to the Commander in Chief Far East for his information.

There are appended copies of a series of documents tracing the development of this study. On the basis of the recommendations made by the Joint Commission (Army-Navy-Manhattan District) for Investigating the Effects of the Atomic Bombs in Japan (Tab 1), the Surgeon General of the Army Service Forces requested the National Research Council to make suitable recommendations for continued studies (Tab 2).

A provisional Committee, at the invitation of the Council, met on 24 June 1946 and their recommendations were transmitted to the Surgeon General of the Army and Navy.

The Surgeon General of the War Department acknowledged the recommendations of the Committee (Tab 3) and made arrangements for a survey of the situation in Japan by two civilian scientists, Drs. Austin Brues and Paul Henshaw (Tab 4). The report prepared by these men further confirmed the desirability of long-term medical and biological studies of the atomic bombing survivors.

The Surgeon General of the Navy indicated the approval and interest of the Department of the Navy (Tab 5). He recommended to the

Joint Chiefs of Staff

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then Secretary of the Navy, Mr. James Forrestal, that a Presidential Directive be issued directing the Council to carry out the indicated studies. Such action was initiated (Tab 6). On 18 November 1946, Mr. Forrestal requested such a directive (Tab 7) and Presidential approval was obtained on 26 November 1946.

The Secretary of War stated the interest of the War Department in the project (Tab 8) and additional expressions of the importance of this project to the Military Services were forwarded by the Surgeon General of the Army (Tab 9) and of the Navy (Tab 10). Shortly thereafter, the National Research Council was informed that no funds were available in the Navy (Tab 11) or Army (Tab 12) to support the project.

The interest of the Air Forces was expressed by the Deputy Chief of Air Staff for Research and Development (Tab 13).

At the request of the Director, the Army Institute of Pathology has been designated as the depository for all X-ray and photographic pictures, case histories, autopsy and biopsy material, and other data collected by the Atomic Bomb Casualty Commission.

The National Research Council approached the U.S. Atomic Energy Commission for financial support for the studies in Japan. A contract for this purpose has been signed (Tab 14).

At the present time, the work of the Committee on Atomic Casualties and its agent in Japan, the Atomic Bomb Casualty Commission must be carried out within the framework of the Military Occupation. The reaffirmation of the interest of the National Defense Establishment in this project, through an expression by the Joint Chiefs of Staff, would be immeasurably helpful, not only to the Committee on Atomic Casualties and its agent in Japan; but also to the occupation authorities who are faced with the assessment of the priority value of this research program.

Yours sincerely,



Detlev W. Bronk  
Chairman

Enclosures