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LIST OF POLICIES APPROVED BY THE PRESIDENT IN THE ATOMIC ENERGY FIELD ON THE RECOMMENDATION OF THE NATIONAL SECURITY COUNCIL OR THE SPECIAL COMMITTEE OF THE NATIONAL SECURITY COUNCIL ON ATOMIC ENERGY

UNITED STATES POLICY ON ATOMIC WARFARE

It is recognized that, in the event of hostilities, the National Military Establishment must be ready to utilize promptly and effectively all appropriate means available, including atomic weapons, in the interest of national security and must therefore plan accordingly. (Par. 12, NSC 30, approved 9/16/48)

The decision as to the employment of atomic weapons in the event of war is to be made by the Chief Executive when he considers such decision to be required. (Par. 13, NSC 30, approved 9/16/48)

In the event of a positive decision, the President would authorize the Secretary of Defense to use atomic weapons under such conditions as the President may specify. (Par. 2 of AGREED CONCEPTS REGARDING ATOMIC WEAPONS, entitled "Use of Atomic Weapons", approved 9/10/52)

AGREED CONCEPTS REGARDING ATOMIC WEAPONS

1. FUNCTION OF THIS SPECIAL COMMITTEE OF THE NATIONAL SECURITY COUNCIL IN ADVISING THE PRESIDENT ON USE OF ATOMIC WEAPONS

a. By law, the National Security Council is to "advise the President with respect to the integration of domestic, foreign and military policies relating to the national security." By direction of the President, the Special Committee of the National Security Council on Atomic Energy, consisting of the Secretary of State, the Secretary of Defense and the Chairman of the Atomic Energy Commission, is to "pass on the directives which I have to make, that affect all three of those Departments."

b. The above directives are interpreted to mean that the President wants the advice of the Special Committee before making any decision regarding the major production objectives of the atomic energy program, the preparatory deployment of atomic weapons, and the use of atomic weapons. This is not interpreted as limiting the statutory function of the Joint Chiefs of Staff as "the principal military advisers to the President, the National Security Council and the Secretary of Defense."

2. USE OF ATOMIC WEAPONS

In the event of a positive decision, the President would authorize the Secretary of Defense to use atomic weapons under such conditions as the President may specify.

3. ATOMIC WEAPONS STOCKPILE CUSTODY AND OPERATION

a. Custodial Responsibility. The Department of Defense should have custodial responsibility for stocks of atomic weapons outside of the continental United States and for such numbers of atomic weapons in the continental United States as may be needed to assure operational flexibility and military readiness for use subject to 2. above. The Atomic Energy Commission should maintain custodial responsibility for the remainder of the stockpile of atomic weapons.

b. Provision of Storage Facilities. Each agency should provide the facilities for storage of atomic weapons over which it maintains custodial responsibility. However, where custodial responsibility may be changed by Presidential directive without physical movement of weapons, reimbursement for existing storage facilities should not be required.

g. Physical Security and Operation of Storage Sites. In the interests of operational readiness and economy of personnel, the Department of Defense should provide the physical security and the services required for the operation of all storage sites for atomic weapons. For storage facilities for which the Atomic Energy Commission is responsible, the services provided by the Department of Defense should include normal administrative services, and, under the technical supervision of the Atomic Energy Commission, the performance of such maintenance, surveillance, modernization, and modification work as is determined appropriate for accomplishment at the site.

d. Access to Atomic Weapons. The Department of Defense should provide the Atomic Energy Commission with surveillance information on, and such access to, atomic weapons under Department of Defense custody as may be necessary to determine the effects of environmental and operational conditions and any weapon modifications required thereby.

4. THE ESTABLISHMENT OF MILITARY REQUIREMENTS AND CHARACTERISTICS OF ATOMIC WEAPONS

a. The Department of Defense should state its military requirements for numbers and types of atomic weapons, including the desired military characteristics thereof.

b. The Atomic Energy Commission should propose rates of production and production goals for weapon materials in the light of stated military requirements and of the Commission's capabilities for meeting these requirements.

c. The President, in the light of a and b above, will determine the atomic weapon production program.

d. In consonance with the responsibility of the Department of Defense to establish military characteristics of atomic weapons, the Department of Defense should establish appropriate criteria and conduct such tests and evaluations, beyond those conducted by the Atomic Energy Commission, as deemed necessary to ascertain the acceptability of weapons to meet these military characteristics.

(Approved 9/10/52)

PROCEDURES WITH RESPECT TO A PRESIDENTIAL DECISION TO USE ATOMIC WEAPONS

June 11, 1952 study, outlining procedures whereby the President may most effectively obtain advice when he is called upon to decide on the use of atomic weapons, which reached the following conclusions approved by the Special Committee of the National Security Council on Atomic Energy:

1. In making any decision regarding the use of atomic weapons, it is considered that the President will want, at minimum, the views of the following officials:

   a. The Joint Chiefs of Staff

   b. The Secretary of Defense

   c. The Secretary of State

   d. The Chairman of the Atomic Energy Commission

2. Any recommendation to the President regarding the use of atomic weapons by the Armed Services should initially be made by, or be referred to, the Joint Chiefs of Staff in view of their "statutory responsibility as the principal military advisers to the President, the National Security Council, and the Secretary of Defense." In presenting their views the Joint Chiefs of Staff should:

   a. Set forth the factors that were taken into account in arriving at its recommendation.

   b. Identify, in general terms, the intended employment of the weapons.

3. Before the President makes a final decision, in order to provide him with a means for obtaining a full exposition of the factors involved from the officials listed in 1. above and in view of the statutory responsibility of the National Security Council to "advise the President with respect to the integration of domestic, foreign, and military policies relating to the national security", a meeting of the President with the Special Committee of the National Security Council on Atomic Energy, together with the Joint Chiefs of Staff, should be convened to consider any recommendation by the Joint Chiefs of Staff regarding the use of atomic weapons.

4. Time permitting, consultation with Congressional leaders should take place before a decision to use atomic weapons is implemented.

5. Additional procedures to be discussed at this meeting should include the extent, nature, and timing of consultations with, notifications to, or requests for action by

a. Other departments and agencies of the Government (the other members of the National Security Council, the Cabinet, Civil Defense, etc.);

b. The American people;

c. Other governments and the United Nations.

6. In the event of a positive decision, the President will authorize the Secretary of Defense to use atomic weapons under such conditions as may be specified.

(Submitted to the President, for his consideration, on 10/24/52)

EXPANSION OF THE FISSIONABLE MATERIAL PRODUCTION CAPACITY

The President designated the Secretaries of State and Defense and the Chairman, Atomic Energy Commission, as a special committee within the framework of the National Security Council to prepare a recommendation to the President on the necessity for the expansion of the atomic energy program along the lines to be recommended by the National Military Establishment.

(Letter to Executive Secretary, NSC, from the President, dated 7/26/49)

* * *

The Special Committee of the National Security Council on Atomic Energy concluded that the proposed acceleration of the atomic energy program is necessary in the interests of national security, that the recent atomic explosion in the USSR increased the urgency with which this proposed program should be executed, and, finally, that any increase in these expenditures by the Atomic Energy Commission required for this proposed program should not be at the expense of other areas of the national defense program. These conclusions were submitted to the President for his consideration on October 10, 1949, and the President, on October 17, 1949, by letter to Senators O'Mahoney and McMahon and Congressman Albert Thomas, indicated that he had approved the use by the Atomic Energy Commission of $30 million of existing reserves for the expansion of the atomic energy program.

ATOMIC ENERGY PLANT EXPANSIONS

PLUTONIUM

YEAR AUTHORIZED	FACILITIES	PRODUCTION RATE AFTER EXPANSION	PLANTS OPERATING
1943-45	HANFORD PLANT		2 piles operating 1 in standby (HANFORD)
1947-49	EXPANSIONS 2 new piles completed Nov. 1950		5 piles Hanford
1950-51	EXPANSIONS 3 Heavy water piles Savannah R. 1 Graphite pile Hanford		11 piles 6 Hanford 5 Savannah
1952	50% EXPANSION 2 Graphite piles 1 Heavy water pile		14 piles 8 Hanford 6 Savannah

URANIUM 235

YEAR AUTHORIZED	FACILITIES	PRODUCTION RATE AFTER EXPANSION	PLANTS OPERATING
1943-45	HANFORD PLANT		K 25-27 Operating (Oak Ridge)
1949	EXPANSIONS K 29-31 completed Dec. 1951		K 25 + 31
1950	EXPANSION K 31-33 PADUCAH		K 25+31, C 31-33
1952	100% EXPANSION K 33 Oak Ridge C 35-37 Paducah X 25+33 Portsmouth		K 25+33 C 31+37 X 25+33

AEC - NOV. 10, 1952

The Atomic Energy Commission and the Department of Defense, as of May 25, 1950, recommended that the President:

a. Approve a construction program for a new tritium production facility capable of producing approximately ..... at a capital cost estimated by the Atomic Energy Commission at approximately $250,000,000.

b. At least until the above reactors are in operation, the existing Hanford reactors be used to produce ..... tritium a year; in addition, preparations be made for producing ..... tritium per year at Hanford at the earliest date and that production at that rate be instituted if required.

(Approved 6/8/50)

* * *

Program for providing new U-235 and plutonium production facilities along the following lines:

a. The construction of additional gaseous diffusion facilities at a new site for the increased production rate of U-235 by about 125% over that attainable with the existing expanded U-235 production program approved on October 19, 1949. The completion date for such facilities has been estimated as November, 1953, on the basis of early approval.

b. The construction of additional reactors at the site to be chosen for the tritium production program for the increased production rate of plutonium by about 50% over that attainable with the existing plutonium and tritium production program approved on June 8, 1950. The completion date for such facilities has been estimated as January, 1955, on the basis of early approval.

c. The expansion of ancillary production and storage facilities to provide for ore acquisition, ore processing, weapon fabrication and weapon storage, commensurate with the fissionable material production program.

(Approved 10/9/50)

* * *

Program designed to expand plutonium output by 50% of the assumed production rate of presently authorized facilities, and oralloy output by 150% of presently authorized facilities.

(Approved 1/17/52)

* * *

Ore Requirements. Ore procurement goals have been established and are believed to be obtainable which will support this expansion when the new production plants reach steady-state operation, and in addition, may permit ore stockpiling by the Commission. (Subsequently, on September 16, 1952, AEC advised that they have established an ore procurement goal of 12,500 tons of uranium ore per year.)

New Facilities. The program for expansion of fissionable materials production will require the construction of new facilities as follows:

a. Adding new reactors at existing reactor sites and constructing necessary supporting facilities.

b. Building additional diffusion plants at existing gaseous diffusion plant sites, building a diffusion plant at a new site and constructing necessary supporting facilities.

c. Expanding ancillary facilities for the processing of source materials and the fabrication and storage of weapons.

Construction for the expansion program should be completed by January 1957 provided the necessary materials and manpower are made available on schedule for the currently authorized atomic energy program as well as for the facilities set forth above.

Costs. The expansion program is roughly estimated to require about $4,900,000,000 in construction costs and will result in an estimated incremental annual operating cost of $700,000,000 when the new facilities are completed.

(Approved by letters from the President to the Chairman, AEC, and the Director of Defense Mobilization, dated 2/25/52)

DEVELOPMENT OF THERMONUCLEAR WEAPONS

Recommendation of the Special Committee that the President:

a. Direct the Atomic Energy Commission to proceed to determine the technical feasibility of a thermonuclear weapon, the scale and rate of effort to be determined jointly by the Atomic Energy Commission and the Department of Defense; and that the necessary ordnance developments and carrier program be undertaken concurrently.

b. Direct the Secretary of State and the Secretary of Defense to undertake a re-examination of our objectives in peace and war and of the effect of these objectives on our strategic plans, in the light of the probable fission bomb capability and possible thermonuclear bomb capability of the Soviet Union.

c. Indicate publicly the intention of this Government to continue work to determine the feasibility of a thermonuclear weapon, and that no further official information on it be made public without the approval of the President.

(Approved 1/31/50)

* * *

The Special Committee recommended, on March 9, 1950, that the President:

a. Note that the thermonuclear weapon program is regarded as a matter of the highest urgency. There is no need for additional funds beyond those currently estimated for the feasibility test of the thermonuclear weapon.

b. Note with approval the program for the test of the feasibility of a thermonuclear weapon and the necessary ordnance and carrier developments, as now envisaged by the Atomic Energy Commission and the Department of Defense.

c. Instruct the Atomic Energy Commission to continue making preparations looking toward quantity production of materials needed for thermonuclear weapons, especially

tritium, to the extent necessary to avoid delay between the termination of feasibility and the start of possible weapon production.

g. Further instruct the Department of Defense and the Atomic Energy Commission to make a report with recommendations as soon as feasible with respect to the scale of preparation for production of materials needed for thermonuclear weapons, especially tritium, this report to include a discussion regarding the feasibility of meeting the production goals of the expanded program which the President approved on October 19, 1949.

(Approved 3/10/50)

* * *

The Atomic Energy Commission and the Department of Defense recommended, on April 4, 1951, that the President approve the following general principles to guide the thermonuclear program in the future:

a. The amounts of tritium to be produced will be determined jointly by the Atomic Energy Commission and the Department of Defense from time to time to meet estimated requirements of the thermonuclear development program rather than to meet a fixed yearly rate.

b. Work on the thermonuclear program will be carried on with the objective of determining the feasibility of a thermonuclear weapon at the earliest practicable date. At the same time, promising developments of fission weapons will be carried forward effectively.

(Approved 4/6/51)

SECURITY OF INFORMATION REGARDING THERMONUCLEAR WEAPONS

Outline to guide Executive Branch personnel in testifying on thermonuclear phases of the atomic energy expansion program, or in responding to correspondents' queries:

Origins of the H-bomb Project. The idea of a bomb deriving its energy from a thermonuclear reaction is not new. As early as 1942, serious attention was given to the possibility of utilizing the high temperatures expected in the fission bomb ("A-bomb") to "ignite" heavy hydrogen isotopes. During the years which followed, this idea was explored extensively although effort was necessarily limited by the demands of the A-bomb project. The present H-bomb project is a continuation and an expansion of the work done in the past, aiming at a demonstration that it is or is not feasible, and at preparation for production should that later be necessary.

Technical Problems of H-bomb Development. In an H-bomb, a mechanism would have to be devised in which a quantity of heavy hydrogen isotopes or a mixture of them would be maintained at a sufficiently high temperature (in the tens of millions of degrees Centigrade) for a sufficient interval of time (measured in millionths of a second) to produce a "thermonuclear reaction". It may be possible to attain such conditions by use of a fission bomb.

Materials Required for an H-bomb. The importance of the heavy hydrogen isotopes, deuterium and tritium, in rapid fusion reactions, is well known. Some of the basic measurements on these reactions were made more than fifteen years ago. The manufacture of tritium in quantity requires neutrons in quantity. This requirement competes for available neutrons with the fissionable material production requirements. The deuterium, however, can be extracted with some effort from natural sources.

Magnitude of an H-bomb Explosion. There have been numerous references to the great energy released from an H-bomb. It has been stated that it might be a thousand times greater than that of a fission bomb. The "critical size" effects which primarily limit the energy release from A-bombs do not apply to H-bombs. There are of course practical limits to the energy release achievable or desirable in an H-bomb.

H-bomb Explosion Effects. The range of destructive blast effect would be increased many times over that of an A-bomb. It might be possible, for instance, to construct an H-bomb whose blast damage in a circle of ten miles radius would be comparable

to that which occurred at Hiroshima in a circle of one mile radius. Heat effects may also be considerably increased, although these effects will be variable and uncertain since they will depend on atmospheric conditions. Ordinarily the hazards of nuclear radiations and radioactive contaminants from an H-bomb would not be significant in comparison with the blast and heat effects, although it might be possible so to design and use an H-bomb that dangerous contamination would be produced locally.

(Approved 6/19/50)

TRANSFERS OF NON-NUCLEAR COMPONENTS OF ATOMIC WEAPONS

Location	Authorized	Transferred	To be Transferred
French Morocco			
United Kingdom			
Spain			
Labrador			
Alaska			
Hawaii			
Okinawa			
Aircraft Carriers			
Training			

NOTE: On December 22, 1952, the President approved the storage of non-nuclear components ..... as storage facilities become available.

TESTS OF ATOMIC AND THERMONUCLEAR WEAPONS (Nevada and Eniwetok)

On the recommendation of the Special Committee, the President authorized the following tests:

Location	Name of Test	Date Authorized	Target
Amchitka Island	Underground	6/28/50	9/15-11/15/51
Amchitka Island	WINDSTORM	10/30/50	9/15-11/15/51
Eniwetok	GREENHOUSE	2/1/51	4/1-6/3/51
Nevada	A, B, E, F	4/11/51	Feb. 1951
Eniwetok	GREENHOUSE (Booster)	5/16/51	5/25/51
Amchitka Island	WINDSTORM	6/4/51	Postponed
Nevada	BUSTER-JANGLE	10/9/51	10/15-12/3/51
Nevada	TUMBLER	2/20/52	As soon as practicable
Nevada	TUMBLER-SNAPPER	3/28/52	4/1-6/4/52
Eniwetok	IVY	9/10/52	11/5/52

ATOMIC ENERGY POLICY WITH RESPECT TO THE UNITED KINGDOM AND CANADA

(The Special Committee of the National Security Council on Atomic Energy submitted to the President, on March 2, 1949, a Report to the President which contained the following conclusions regarding the relationship among the United States, the United Kingdom and Canada in the field of atomic energy which would provide maximum security for the United States. The President approved these conclusions on March 31, 1949. Subsequently the President met with key members of Congress to discuss these conclusions, and representatives of State, Defense and AEC testified regarding the conclusions before the Joint Congressional Committee on Atomic Energy. Although considerable skepticism was expressed by various members of Congress in these meetings, it was agreed that preliminary negotiations should be undertaken with the view to ascertaining British and Canadian reaction. These negotiations disclosed that the British, particularly, were not prepared to accept these conclusions, especially in view of their desire to develop production facilities in the United Kingdom. About the time that this situation developed, the revelation of Klaus Fuchs' espionage activities occurred, and further negotiations on these conclusions were suspended indefinitely. More recent action on this subject has occurred under the amendment to the Atomic Energy Act approved on October 30, 1951, and is reflected in the actions of the National Security Council regarding the Canadian ore refinery and the exchange of information with the British which are reproduced below. The question of the classification of certain atomic weapons data as it affects planning by the Supreme Headquarters, Allied Powers in Europe, is currently being investigated by the Atomic Energy Commission in consultation with the Department of Defense, and the findings will be reported back to the Special Committee for subsequent consideration.)

CONCLUSION

The United States should enter into negotiations with the United Kingdom and Canada with a view to achieving substantially the results set forth below.

Taking into account that (a) the United States desires to secure an arrangement that is mutually advantageous, and (b) the United States has not discussed such an arrangement with the United Kingdom and Canada and cannot, therefore, at this time appraise their reactions, the following outcome of negotiation would offer the greatest assurance of serving the common defense and security from the United States point of view.

1. To establish full cooperation among the three parties in all fields of atomic energy including atomic weapons. Information and assistance shall be made available among the three countries for programs established in accordance with the general principles agreed in 2. below. Such information and assistance shall be made available by the recipient country only to such persons and agencies having specific need therefor.

2. To establish freedom of action among the parties with regard to their respective atomic energy programs consistent with the following general principles to which the parties should agree:

a. Production and storage facilities should be located with due regard for strategic considerations. Specifically:

(1) To the fullest extent practicable fissionable material, production plants, large-scale atomic energy developments and supplies of strategic material should be located either in the United States or in Canada.

(2) All portions of any expanded production program should be located either in the United States or in Canada and present plans for such work in the United Kingdom should be modified to include only that portion for which appreciable commitments in the line of construction have been made.

(3) To the fullest extent practicable production facilities for fabrication of atomic weapons should be located in Canada or in the United States not only to provide for better strategic location but also to supplement United States facilities in case of emergency.

(4) Nuclear components of atomic weapons should be stored in the United Kingdom only to the extent required by common war plans. All other nuclear components normally should be stored in the United States or in Canada.

b. The programs of the parties should be coordinated in such a way as to make the most effective use of joint resources, specifically raw materials and effort:

(1) It is recognized that the United States will make the major effort of production of atomic weapons as required for joint defense.

(2) For the next five years it is expected that the United Kingdom-Canadian effort should be on such a scale as not to require more than 10 percent of the raw material available, and allocation of raw material will be made accordingly.

(3) Planning of programs of research, development, and production should be such as to make the most effective use of joint resources of technical personnel and facilities.

c. Establish effective coordination with respect to the disclosure to other governments, including the other dominions.

3. To provide for the establishment of effective cooperation among the three parties with respect to all defense measures against the effects of attack from atomic weapons.

4. To provide for continuation of the Combined Policy Committee with its present ratio of membership from the United States, the United Kingdom and Canada, to carry out and supervise (a) these arrangements and (b) the work of the CDA which will be continued, it being recognized that modification of the principles enunciated in paragraphs 1 and 2 shall require the unanimous consent of the three countries.

5. To establish cooperation among the three parties with respect to bases necessary for delivery of atomic weapons. Bases should be established with due regard for strategic considerations. The three parties should cooperate in acquiring necessary base rights. For bases required in United Kingdom by common war plans, the necessary advance preparations should be made at these bases including the construction of special buildings and installation of special equipment, and the practice and training of the necessary military combat teams should be permitted. The three parties should cooperate in the training of the special military units required for the delivery of atomic weapons. (Item 5 should be supervised by the Military and not the Combined Policy Committee. If made a subject of separate negotiations, such negotiations should be coordinated with 1, 2 and 3 above.)

6. To provide for an arrangement which will continue effective over a relatively long period of time.

It is suggested that the term of these arrangements should be of the order of twenty years, with provision for withdrawal thereafter upon appropriate notification. Provisions for the allocation of raw materials (2-b-(2) above) should be subject for reconsideration at the end of 5 years.

* * *

COMMUNICATION OF DATA TO CANADIANS CONCERNING NEW ORE REFINERY (NSC 120/2)

The National Security Council, with the participation of the Secretary of the Treasury, the Secretary of Commerce, the Director of Defense Mobilization, and the Chairman of the Atomic Energy Commission, recommended that the President determine that an arrangement whereby

a. The Atomic Energy Commission may communicate to the Canadian Government such restricted information as may be necessary to enable the Canadians to design, construct and operate a uranium ore refinery incorporating the most recent U. S. technology, and which would be capable of processing all Canadian ore concentrates to a product meeting specifications as a feed to the U. S. metal production chain, and

b. The Atomic Energy Commission may authorize a U. S. company to assist the Canadians in this program,

would substantially promote and would not endanger the common defense and security of the United States.

(Approved 1/17/52)

* * *

EXCHANGE OF CERTAIN RESTRICTED DATA WITH THE BRITISH GOVERNMENT

The National Security Council, with the participation of the Chairman of the Atomic Energy Commission, recommended that the President determine that an arrangement whereby, on a continuing basis,

a. The AEC may communicate to the British Government certain restricted data concerning the production of krypton-85 and of plutonium in the USA in so far as it relates to the release and measurement of krypton-85 in the atmosphere, and

b. The British Government will in return communicate to the Atomic Energy Commission and other Government agencies certain information, data, samples and scientific results bearing on the same problem,

would substantially promote and would not endanger the common defense and security of the United States; and that the President authorize the Director of Central Intelligence to prescribe, subject to the security requirements of the Atomic Energy Commission, the mechanism for the dissemination for intelligence purposes of restricted data information in paragraphs a and b above.

(Approved 6/26/52)