

ORIGIN AND SIGNIFICANCE OF THE ATOMIC
ENERGY ACT OF 1946

by

DAVID MARSHALL SEAVER, B.A.

A THESIS

IN

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CHAPTER I

ATOMIC ENERGY PRIOR TO 1945

Statement of Problem

The development of atomic energy and its eventual governmental control in the United States provides a fascinating historical account as well as a study into the nature of our democratic governmental processes. Research and development that led to the construction of an atomic bomb was carried on behind such a veil of secrecy that very few people were aware of what was being done. It is safe to assume that the average American was unaware of even the possibility of an atomic bomb. When, however, the bomb was dropped on Hiroshima on August 6, 1945, and on Nagasaki three days later, many thoughtful persons in the United States realized that atomic energy had to be controlled and divorced from exclusive military ownership.

The task of creating the framework within which atomic energy could be controlled in a democratic manner, without endangering national security, was by no means simple. At the same time, it was a task of tremendous importance to the United States of 1945 as well as our country of today. A system had to be devised in order to deal with the novel problem of atomic energy. The resulting Atomic Energy Act

of 1946 provided the means by which the American democratic process could adapt to a program that was, of necessity, secretive in nature.¹

The problem faced at the end of World War II was that of creating an equilibrium between secrecy and democratic processes.² Significance must be attached to the method by which this equilibrium was achieved, and that is the purpose of this thesis. This study delves into the flexibility of our democratic process in solving the problem that faced the United States in dealing with the question of the control of atomic energy.

The following chapters will deal chiefly with the establishment and function of these three important aspects of the Atomic Energy Act of 1946: the structure of the Atomic Energy Commission, the role of the military in the AEC, and the powers of control of the AEC. Primary sources, such as Senate and House hearings, the Congressional Record,

¹Morgan Thomas states the importance of the Atomic Energy Act of 1946, which held the framework for controlling atomic energy, in this manner: "Atomic energy might well have had altogether disastrous consequences for democratic government in America. Yet we seem to have the means to not only control the atom, but to do it in such a way that it can serve our own well-being. . . ." Morgan Thomas, Atomic Energy and Congress (Ann Arbor: University of Michigan Press, 1955), p. 1.

²Ibid., p. 237. "The atom required, and still requires, expert science, secrecy, and wise policy-making to a unique degree. This means that the democratic system of representative government has to adapt itself to a fluid program behind a wall of secrecy."

and special reports issued by the government, have yielded the bulk of information for this study. For reasons that are not wholly clear, the Atomic Energy Act of 1946 has not been given the attention it deserves in the way of scholarly writing.

Necessity dictated that a great deal of the atomic energy program be kept secret and yet the American people required some method by which the program could be checked. How this was achieved, through the Atomic Energy Act of 1946, was a tremendous accomplishment that should make Americans proud of their democratic government. Unfortunately, Americans are vastly unaware of the importance and uniqueness of this episode in American history. This thesis attempts to relate to the reader what is one of the most significant events in contemporary American political science.

Status of Atomic Energy Prior to 1940

Atomic energy had its beginning in 1918 when Ernest Rutherford, at Cambridge University, became convinced that the atom could be disintegrated artificially.³ During World War I, Rutherford spread his knowledge by keeping in close communication with his students and colleagues in neutral countries. At that time atomic research was being carried on in Copenhagen by Niels Bohr, in Berlin by Max

³Robert Jungk, Brighter Than a Thousand Suns (New York: Harcourt, Brace and Co., 1958), p. 3.

Horn, James Franck, and David Hilbert, and at Cambridge by Rutherford.⁴ An American physicist, J. Robert Oppenheimer, studied in Berlin in 1926 and was soon known as a brilliant student.⁵ From 1926 to 1938, atomic research continued in universities throughout the world, with physicists such as Oppenheimer exchanging theories and discoveries.

A few days before Christmas, in 1938, Otto Hahn completed a very significant experiment at the Kaiser Wilhelm Institute of Chemistry in Berlin. Hahn artificially split the nucleus of an uranium atom, proving what Rutherford had theorized in 1918.⁶ His accomplishment caused great activity in England and the United States that continued after the outbreak of World War II in Europe. Ironically, the Third Reich did not immediately pursue the possibility of atomic energy and Hahn's discovery was shared with physicists who were not German.⁷ Many scientists, including Niels Bohr of Denmark and Enrico Fermi of Italy, fled to the

⁴Ibid., p. 5. Rutherford, however, was to die in 1937 and when he did, he was convinced that atomic energy would never become a reality.

⁵Ibid., p. 19. Oppenheimer would later distinguish himself as one of the principal scientists on the atomic bomb project.

⁶Ronald W. Clark, The Birth of the Bomb (New York: Horizon Press, 1961), p. 6.

⁷Dr. Niels Bohr was informed of the experiment by an Austrian scientist, Lise Meitner, who had been forced to leave Germany. William L. Laurence, Dawn Over Zero (New York: Alfred A. Knopf Co., 1953), p. 34.

United States. Consequently, research on atomic energy centered in the United States after 1939.⁸

During 1939, there were numerous publications in scientific journals expressing the feasibility of uranium-235 fission resulting in tremendous releases of energy. In January of 1939, uranium fission was in its embryonic form when it was first proven experimentally in the United States. Realizing the military implications of such power, a group of foreign physicists working in the United States attempted to persuade all physicists to cease publication of their findings.⁹

Their attempts were unsuccessful and resulted in enough information being published to enable A. G. Ingalls, in an editorial in Scientific American, in July of 1939, to express fear of ". . . exceedingly dire results -- explosions of magnitude heretofore unknown. . . ."¹⁰ In 1940, however, publications concerning atomic energy ceased and the editorial in the July, 1939, Scientific American remained as one of

⁸Most of the scientists that fled did so because the Germans, although not putting great emphasis on atomic research, were restricting exchange of ideas.

⁹Henry D. Smyth, A General Account of the Development of Methods of Using Atomic Energy for Military Purposes Under the Auspices of the United States Government (Washington: U. S. Government Printing Office, 1945), p. 31. The group of foreign scientists consisted of Enrico Fermi, Edward Teller, Victor F. Weisskopf, Eugene Wigner, and Leo Szilard.

¹⁰A. G. Ingalls, "Incomparable Promise or Awful Threat?", Scientific American, CLXI (July, 1939), p. 2.

the last publications concerning atomic energy until 1945.¹¹ The sudden cease in published articles, however, was not accidental.

The reason for the halt in publications can be attributed to an organization that appealed to the scientists. In April of 1940, the Division of Physical Sciences of the National Research Council had agreed to encourage physicists to halt publications. The Reference Committee of the National Research Council, to which all physicists presented papers before publication, was very successful in bringing about the cessation.¹²

While attempts at halting publications were being made during 1939, the scientific community also contacted the government concerning further study in uranium fission. Dr. George B. Pegram, of the University of Columbia, contacted the Navy Department in March, 1939, and requested a meeting between Navy officials, Dr. Enrico Fermi, and himself, from which nothing concrete developed.¹³ During the fall of 1939, Albert Einstein wrote a letter to President Roosevelt encouraging government research in atomic energy and he responded by appointing a Uranium

¹¹The editorial in Scientific American is exemplary of all articles published during this period, outside of those in technical journals, in that it speculates as to the possibility of atomic energy. It was not known, of course, that the government had begun to take interest.

¹²Smyth, op. cit., p. 31.

¹³Arthur H. Compton, Atomic Quest (New York: Oxford University Press, 1946), p. 26.

Committee to meet on October 21, 1939.¹⁴ The establishment of the Uranium Committee signified the entrance of the United States government into atomic energy research and the entire program began to take on new meaning. On November 1, 1939, the committee reported to the President that atomic energy research was "worthy of direct financial support by the government."¹⁵

Evolution of Wartime Agencies

Roosevelt's tendency to create agencies to perform certain tasks is certainly an established fact. Atomic energy was no different in this respect as the White House directed the program through a series of interlocking agencies. The evolution of the wartime agencies can be a confusing affair and the least complicated method of describing them is chronologically.

In June of 1940, the National Defense Research Committee (hereafter referred to as the NDRC) was established

¹⁴ William L. Laurence, Men and Atoms (New York: Simon and Schuster, 1959), pp. 59-60. The letter was conveyed to Roosevelt on October 11, 1939, by Dr. Alexander Sachs who, as a personal adviser to Roosevelt, was known to have access to the White House. A group of physicists signed the letter and then asked Einstein to do so because his signature would add prestige. It is debatable as to whether Einstein even read the letter or knew what was being done in atomic research. After the war, Einstein stated that if he had known the Germans were not producing an atomic bomb, he would not have signed the letter.

¹⁵ "What is Congress Doing to Control Atomic Energy?", Congressional Digest, XXV (May, 1946), p. 134.

and Roosevelt directed that it assume the duties of the Uranium Committee.¹⁶ On June 28, 1941, however, the NDRC was made part of a larger organization, the Office of Scientific Research and Development (hereafter referred to as the OSRD), headed by Dr. Vannevar Bush.¹⁷ The NDRC was of particular importance in the work toward nuclear fission. Under Bush, the NDRC served as a sort of rallying point for physicists working in atomic energy. The co-operation that was achieved by the NDRC was of incalculable importance.¹⁸

On October 9, 1941, Bush met with Roosevelt and Vice-President Henry Wallace and it was decided that the uranium program was to be broadened. It was also decided that

¹⁶Compton, op. cit., p. 34. The Uranium Committee had been directed to investigate the possibilities of uranium fission, but the NDRC was a much larger organization. The NDRC also granted contracts in atomic research to Columbia University, Princeton University, Cornell University, the University of Minnesota, Johns Hopkins University, the University of Chicago, the University of Virginia, Iowa State University, and the University of California. The civilian members of the committee were Dr. Einstein, Dr. Sachs, Dr. Karl Compton, Dr. Pegram, and Dr. Lyman Briggs who was director of the U. S. Bureau of Standards. Colonel Keith Adamson and Commander Gilbert Hoover represented the military.

¹⁷Irvin Stewart, Organizing Scientific Research for War (Boston: Little, Brown and Co., 1948), p. 35. Compton considers Bush as the driving force behind the final development of the atomic bomb because he was able to rally the scientific community and persuade government officials of the need for nuclear research.

¹⁸Reports that were received in the United States indicated that one of the reasons the Germans were not pursuing an atomic bomb project was the jealousy among German physicists.

future discussions on general policy should be confined among the President, Wallace, the Secretary of War, Harry Stimson, the Chief of Staff, George Marshall, Vannevar Bush, and James B. Conant, also of the OSRD.¹⁹ In keeping with the decision to broaden the program, Bush met with the NDRC on November 28, 1941, and persuaded them to transfer the uranium program to the OSRD.²⁰

In 1942, the atomic energy program entered an entirely new phase when it was decided that the military should take over the project and accelerate work toward an atomic bomb. The United States Army Corps of Engineers was directed to establish a new engineering district for that purpose. On August 17, 1942, the Manhattan Engineering District (hereafter referred to as the MED) was set up with its project having the code name Development of Substitute Materials Project.²¹

Brigadier General Leslie R. Groves was placed in charge of the MED in respect to its construction and operation. His appointment was made by General Marshall at the direction of the Secretary of War. Groves was directly responsible to Marshall, who, of course, was responsible to Roosevelt. General Groves was chosen for the job

¹⁹Clark, op. cit., p. 167.

²⁰Smyth, op. cit., p. 53.

²¹Ibid., p. 59.

primarily because of his experience on large construction projects and his organizational ability.²²

The project was greatly compartmentalized by Groves and no one in a particular department could speak with anyone in another department without permission from his department director. This was cause for some consternation among the scientists, but also provided a source of amusement. Henry O. Smyth was the object of some amusement among the scientists in that he was the director of two departments, and, consequently, he had to have permission from himself to speak to himself.²³ Groves, however, insisted that such compartmentalization was necessary because, in his words, "if I brought them into the whole project, they would never do their own job. There was just too much of scientific interest, and they would just be frittering from one thing to another."²⁴

On September 23, 1942, Roosevelt met with Marshall, Conant, Stimson, Bush, and Wallace, and it was decided at this meeting that a committee should be organized to discuss the possible uses of the atomic bomb. A Military Policy Committee was then established with Dr. Bush as

²²Jungk, op. cit., p. 117. General Groves had, in fact, been the supervisor on the building of the Pentagon in Washington, D. C.

²³Compton, loc. cit..

²⁴U. S. Atomic Energy Commission, In the Matter of J. Robert Oppenheimer, Transcript of Hearing Before Personnel Security Board (Washington: U. S. Government Printing Office, 195⁴), p. 930.

chairman.²⁵ The atomic bomb project was thus placed under almost complete military control. A significant fact must be remembered, however, and that is that the President had a great deal of control over the entire operation. The military achieved complete domination of the project on May 1, 1943, when research contracts of the OSRD were transferred to the MED.²⁶

While the atomic bomb project was progressing under the guidance of the government, many of the scientists involved were anxious to have atomic energy controlled by a civilian organization with peaceful as well as military goals. An important step in this direction was taken in August, 1944, with the establishment of the Tolman Committee, headed by Dr. Richard C. Tolman.²⁷ When this committee submitted its report to General Groves on December 28, 1944, it contained three recommendations that bear a striking resemblance to the policies of the future AEC: (1) nuclear power for driving naval vessels should be developed immediately, (2) it is important for the welfare and safety of

²⁵Smyth, op. cit., p. 60. Also on the committee were General Groves, Rear Admiral W. R. Purnell, and Major General W. D. Styer.

²⁶Ibid.

²⁷Richard G. Hewlett and Oscar E. Anderson, The New World, 1939-1946, Vol. I., A History of the U. S. Atomic Energy Commission (University Park, Pennsylvania: Pennsylvania State University Press, 1962), pp. 324-325. Other members of the committee were Warren K. Lewis, Admiral Earle Mills, and Henry D. Smyth. Tolman had been an important scientist on the MED.

the nation that a nucleonics industry should be strongly encouraged, (3) while all military information should be carefully kept secret a wide dissemination of scientific and technical knowledge of nucleonics will be essential to the rapid progress needed to maintain the safety of the nation.²⁸

On May 31, 1945, President Truman appointed an Interim Committee to discuss uses of atomic energy. Truman did so at the request of Secretary of War Stimson.²⁹ Arthur H. Compton stated that the Interim Committee was important because "its recommendations were destined to set the general direction that the United States would take."³⁰ It was this committee, in fact, that decided that the bomb should be used against Japan. It is easily seen that the trend in atomic energy in 1945 was toward civilian control and peaceful research. It was impossible, however, for anything concrete to be accomplished until the end of World War II.

²⁸Compton, op. cit., p. 233. In accordance with the last recommendation, General Groves directed H. D. Smyth to prepare the report cited above.

²⁹Jungk, op. cit., p. 180. Stimson had, in fact, asked Roosevelt to establish such a committee shortly before the latter's death. Consequently, this subject was the object of Stimson's first conference with the newly inaugurated Truman.

³⁰Compton, op. cit., p. 231. The committee consisted of Stimson, George Harrison, James Byrnes, Ralph Bard, and William Clayton from the government. From the scientific community, Vannevar Bush, Karl Compton, and James Conant were appointed.

Significance of Wartime Precedents

The progressive evolution of the control over research and development of atomic energy set certain precedents that are mostly significant in a negative sense. At the end of World War II the White House was in control of the atomic energy program and its goals were, of necessity, military in nature. During the course of the war, Roosevelt maintained close scrutiny over the atomic bomb project. This was in keeping with his assumption of many military powers as Commander-in-Chief. Presidential control may be separated into three distinct phases.

At the outset Roosevelt was in close contact with the scientific community. His concern was directed toward evaluation of research in atomic energy and its possible implications. It was with these intentions that Roosevelt appointed the Uranium Committee in 1939. It must be understood, however, that military application, prompted by fear of German research, was the primary goal. The significant point is that the White House dealt primarily with civilians at the beginning. Civilians remained at the focal point of Roosevelt's considerations as the project was transferred to the OSRD from the NDRC. This was, of course, necessary because only the universities were capable of carrying on the essential research.

With the establishment of the MED, the direction of the atomic bomb project continued to come from the White House, but there was a significant shift. The President dealt primarily with the military. Although the civilian scientists continued to perform the task of building an atomic bomb, they were directly dealt with by the military through Secretary of War Stimson, General Marshall, and General Groves. An excellent example of this change was the Military Policy Committee. For a short period of time, this committee controlled the project. There was one civilian, Dr. Bush, on the committee, but when it gave way to the MED, civilians obviously took a lesser role in the direction of the project. The Military Policy Committee, therefore, may be considered as transitional in the shift from civilian to military control of atomic energy.

In 1944, the atomic bomb project was well on its way to completion and so peaceful uses of atomic energy began to be considered more fully. Roosevelt's Tolman Committee in 1944 and Truman's Interim Committee in 1945 represent a reversal of the trend back toward civilian control. These committees had no power, but they did have civilian scientists on them in an advisory capacity. Their significance, however, is important in view of what was to occur in 1946.

After World War II, civilian control of atomic energy was able to be achieved. It was realized, however, that

military participation was necessary in order to assure an adequate defense program. The Atomic Energy Act of 1946 provided the framework by which a workable compromise was achieved. The act placed atomic energy under the control of an Atomic Energy Commission comprised of civilians. The military was given a voice in the program through the Military Liason Committee. Although the President remained as the official head of all atomic energy programs, a Joint Committee on Atomic Energy was established in Congress. Consequently, some precedents set during the war were broken by the act of 1946.

The most significant wartime precedent that was broken during the period of legislative consideration was that civilians took the initiative in securing the future of atomic energy. After the war, conditions were conducive for providing domestic legislation that would assure continued military research, but would also encourage research in peaceful uses of atomic energy.

Perhaps the most important fact that indicated civilian control during the postwar era was necessary was the position of the scientists. The scientists on the Manhattan project were very restricted by the military administrators. After hostilities ceased, a method had to be devised that would protect American secrets, secure national defense, encourage research, and provide for civilian control.

CHAPTER II

THE ESTABLISHMENT OF THE AEC: THE LEGISLATIVE CONFLICT

The Postwar Confusion

The flood of proposals for the domestic control of atomic energy that was to result in near mass confusion actually began in the summer of 1944 in the OSRD. At that time consideration was given, especially by Bush and Conant, for long-range control of nuclear power.¹ It was impossible, of course, for any action to be taken at that time. Speculations and proposals made by Bush and Conant in 1944, however, were not made in vain.

Bush and Conant's conception was that a twelve-man commission on atomic energy should be appointed by the President. The commissioners would be part-time employees with no compensation. Comprising the commission, would be five scientists, nominated by the National Academy of Sciences, three civilians, two Naval officers, and two Army officers.² When the Interim Committee met on July 19, 1945, Bush and Conant's OSRD proposals served as a useful guide in the

¹Richard G. Hewlett and Oscar E. Anderson, The New World, 1939-1946, Vol. I, A History of the United States Atomic Energy Commission (University Park, Pennsylvania: Pennsylvania State University Press, 1962), p. 409.

²Ibid.

formulation of a new bill.³ When the bill was finally drafted, it resembled the earlier OSRD proposal in its general outline.⁴ It called for a part-time commission of nine members, five civilians and two each from the Army and Navy. The War Department hoped that its bill would be introduced in Congress as soon as it convened. This, however, did not occur.

In the opening hours of the first session of the 79th Congress, many proposals concerning atomic energy were introduced. Brien McMahon, Senator from Connecticut, presented his plan by which atomic energy would be controlled by a board consisting of Cabinet officers and other public servants.⁵ Other proposals came forth in a very confused manner and statements made illustrated that Congress knew very little about atomic energy or its consequences.

Finally, the White House offered direction. On October 3, 1945, Truman sent a message to Congress in which he urged enactment of legislation for the purpose of controlling atomic energy.⁶ The President suggested that any

³Ibid., p. 412.

⁴Ibid. The bill was drafted by two lawyers, William L. Marbury and Kenneth C. Royal, who were employed by the War Department.

⁵U.S., Congressional Record, 79th Cong., 1st Sess., 1945, XCI, part 6, 8361.

⁶U.S., Congress, House of Representatives, Military Affairs Committee, Message From the President, H. Doc. 301, 79th Cong., 1st Sess., 1945, p. 2.

legislation "should give jurisdiction for this purpose to an Atomic Energy Commission with its members appointed by the President, with the advice and consent of the Senate."⁷ The War Department again hoped for fast action. The bill that had been drafted by Marbury and Royall was given to Senator Edwin C. Johnson of Colorado for introduction in the Senate and to Andrew Jackson May for introduction into the House.⁸

The legislative conflict was now ready to begin. The atmosphere surrounding the introduction of various bills still remained one of confusion, apprehension, and anxiety. Congressman Jerry Voorhis of California stated, in part, that atomic energy had,

. . . plunged mankind into a completely new world and placed in his hand the power to either create a world of peace heretofore undreamed of, or to wipe from the earth the civilization that has been built since the beginning of history -- yes; even to destroy himself.⁹

Statements of this nature appeared throughout the proceedings when atomic energy legislation was introduced.

Congress was not the only excited segment of society. The press also contributed to speculation concerning atomic

⁷Congressional Record, op. cit., part 7, 9322.

⁸Hewlett and Anderson, op. cit., p. 428. May and Johnson were chairmen of the Military Affairs Committee in their respective houses.

⁹Congressional Record, op. cit., part 13, A4655.

energy. The New York Times, as well as other papers across the nation, reported countless statements made by various personages concerning the dilemma with which the government was faced. Stimson was naturally given great coverage by the press. Consequently, readers everywhere must have read with great concern Stimson's statement that any satisfaction Americans felt over the explosion of the bomb on Hiroshima must be overshadowed by a deeper feeling of responsibility.¹⁰

Obviously, conditions were not conducive to an orderly enactment of legislation by Congress. Congressmen knew very little about atomic energy and it can be safely assumed that the public knew even less. Congress was thus given the task of distilling various proposals, through apprehensive times, into machinery by which the future of atomic energy would be bright. The legislative battle that followed illustrates the ability of Congress to perform its function even under the most adverse conditions.

The War Department Bill in Congress

On October 3, 1945, the same day of Truman's message, Congressman May introduced the War Department bill in the House.¹¹ Speaker of the House Sam Rayburn referred the

¹⁰New York Times, August 10, 1945.

¹¹U.S., Congress, House of Representatives, Military Affairs Committee, Report on H.R. 4566, H. Rept. 1186, 79th Cong., 1st Sess., 1945, p. 3.

bill, designated as H.R. 4280, to the Military Affairs Committee.¹² The War Department, urging fast enactment, was no doubt pleased when hearings were scheduled by the Military Affairs Committee for October 9 and October 18, 1945.¹³

The major provisions of the bill, which was drafted earlier under the auspices of the Interim Committee, were as follows:

- 1) An Atomic Energy Commission would be established to control the development and use of atomic energy in the United States.
- 2) The Commission would consist of nine part-time members, appointed by the President with the consent of the Senate.
- 3) Members of the Commission would serve for nine years and be compensated on a per diem basis.
- 4) A full-time Administrator and Deputy Administrator would be appointed with salaries of \$15,000 and \$12,000 per year respectively.
- 5) The Commission would be allowed to engage any persons necessary without regard to Civil Service laws.
- 6) At least one and as many as two members of the Commission would be military officers.¹⁴

The hearings held before the Military Affairs Committee proceeded in rapid fashion. Testimony was taken from only

¹²Hewlett and Anderson, op. cit., p. 429.

¹³U.S., Congress, House of Representatives, Military Affairs Committee, Hearings on H.R. 4280, 79th Cong., 1st Sess., 1945, p. 2.

¹⁴H. Rept. 1186, op. cit., p. 2.

a few witnesses, all of whom had some favorable interest in passage of the bill. Witnesses included Secretary of War Patterson, Stimson having resigned in September, General Groves, Dr. Bush, Dr. Conant, and Dr. J. Robert Oppenheimer. All of these witnesses expressed the same desire for immediate control of atomic energy.¹⁵ Endorsement for the bill was also received by these men, who obviously were in favor of its adoption because they had been involved in its inception.

After holding hearings only two days, the Military Affairs Committee went into executive session to consider H.R. 4280. The Committee met in executive session for approximately three weeks and then reported H.R. 4280 in a majority report with minor amendments. The amended version of H.R. 4280 was introduced into the House on November 1, 1945, as a new bill and designated as H.R. 4566.¹⁶ The War Department thus achieved, in the House, the quick action it had desired.

Criticism of H.R. 4566 was overwhelming. Dr. Harold Urey had sent a letter to the Military Affairs Committee when it was hearing testimony on H.R. 4280, in which he pointed out perhaps the most obvious fault in the bill. Dr. Urey stated:

¹⁵Hearings on H.R. 4280, op. cit.

¹⁶H. Rept. 1186, op. cit., p. 3.

Because of the complexities of the problems of atomic energy, I believe the part-time Commission will have little knowledge of the whole field and the Administrator and Deputy Administrator will become, by various means, but largely because of their superior knowledge, the directors of the Commission rather than the reverse.¹⁷

Criticism of H.R. 4566 was also forthcoming from two members of the Military Affairs Committee, Chet Holifield and Melvin Price, who issued dissenting views on the bill. Their recommendations were:

- 1) The Commission should have full-time, well-paid members.
- 2) Commission members should be removable by the President.
- 3) The Administrator should be appointed by the President and serve at his pleasure.¹⁸

Scientists were vehemently opposed to H.R. 4566. Except for the scientists who had a role in the drafting of the bill, the scientific community rejected the bill as inadequate. The chief opposition to the bill by the scientists was that it would restrict scientific development through its vague provisions concerning security measures.¹⁹ Most scientists did not oppose the basic outline of the bill, but the broad powers given to the commission to control atomic energy.

¹⁷ Hearings on H.R. 4566, op. cit., p. 135.

¹⁸ Ibid., p. 3.

¹⁹ Hewlett and Anderson, op. cit., p. 432.

The War Department bill did not fare well in the Senate, either. Senator Johnson had attempted to introduce the bill in the Senate on October 3, 1945, and have it referred to the Military Affairs Committee of the Senate. Senator Vandenberg of Michigan objected to the motion of Senator Johnson because he felt only a special joint committee would be competent in dealing with proposals concerning atomic energy. Vandenberg, through a parliamentary maneuver, succeeded in blocking referral of the War Department bill to any committee until the House had acted on his resolution for a joint committee.²⁰ Consequently, the War Department bill never progressed in the Senate.

The situation in the Senate and the criticisms that were being made against the War Department bill rendered it an apparent failure. Many reasons can be given for this failure. Although the motives of the framers were questioned by some, blame for the failure of the War Department bill may be placed more correctly on haste and misunderstanding of the problem.

The shortcomings of the War Department bill and its subsequent failure are excellently illustrated by two articles that appeared in the press in October, 1945. An editorial in the Washington Post of October 19, 1945, made the following appraisal of the War Department bill:

²⁰Congressional Record, op. cit., part 7, 9398.

The fatal weakness of the May-Johnson bill is that it attempts to create specific machinery before a national policy can be worked out. We think that it is time for Dr. J. B. Conant and others who are said to have had a hand in drafting this clumsy and dangerous measure to recall it and then help Congress to get off to a better start.²¹

Perhaps the most fitting epitaph for the War Department bill is the following editorial which appeared in the Cincinnati Times-Star on October 25, 1945:

This bill was prepared by the War Department, introduced by the President and rushed through two hearings, at which no real discussion was permitted by the Congressional sponsors. There has been no public weighing of its merits or defects by scientists or by representatives of the people. It might fairly be called a product of atomic hysteria.²²

The War Department bill had objectionable features that were assailed by many observers. Much of the criticism, especially that aimed at the framers of the bill, was unfounded. The two main weaknesses of the bill that did warrant criticism were its military representation provision and the part-time nature of the commission. The Atomic Energy Act of 1946, however, was improved by the endorsers of the War Department bill. The War Department bill enabled Congress to see that there was a definite need for some type of military representation even though the bill was rejected.

²¹ Ibid., part 13, A4549.

²² Ibid., A4531.

The War Department bill had simply gone too far in its proposals for military representation and so it did not gain sufficient support for passage.

Formulation of the McMahon Bill

The Senate proceeded in a much more sane manner than did the House. On October 9, 1945, Senator McMahon introduced a resolution that would establish a special committee in the Senate to study atomic energy and consider all bills related to it.²³ On October 23, 1945, the Senate passed the resolution and created a special committee of eleven members. Three days later the president pro tempore of the Senate, Kenneth McKellar, appointed McMahon chairman.²⁴

At the time this was occurring in the Senate, events were underway that would soon affect the Senate and eventually the Atomic Energy Act of 1946. James R. Newman, assistant to John Snyder in the Office of War Mobilization and Reconversion, was convinced that the War Department bill was inadequate for long-range use. Newman then sent his criticisms, through Snyder, to Truman on October 15. The President then saw the need for the formulation of an administration position on the matter and he assigned the OWMR the responsibility for atomic energy legislation.²⁵

²³Ibid., part 7, 9472. The resolution was designated S. Res. 179.

²⁴Hewlett and Anderson, op. cit., p. 437

²⁵Ibid.

Due to the increasing opposition to the War Department bill, Truman withdrew his support and left the OWMR and McMahon's new committee to find a substitute.

Newman, unable to carry the burden of formulating legislation alone, sought the aid of Byron S. Miller. After much consultation together and with members of McMahon's committee, Newman and Miller were able to present broad principles of their bill. Their draft contained the following major provisions:

- 1) Atomic energy would be controlled by a nine-man commission.
- 2) Members of the commission would be full-time.
- 3) The commissioners and the administrator would be appointed by the President and subject to his normal removal powers.²⁶

The departure of Newman and Miller's draft from the War Department bill is apparent. The commission would consist of full-time men rather than part-time. Perhaps the most important difference, however, concerned the power of the President. Under the Newman-Miller draft, the administrator would be appointed by, and responsible to, the President rather than the commission. Thus many of the fears expressed about a dictatorial commission would be mollified. Newman and Miller also made a point of defining commission powers much more definitely than the War Department

²⁶James R. Newman and Byron S. Miller, The Control of Atomic Energy, A Study of Its Social, Economic, and Political Implications (New York: Whittlesey Press, 1948), p. 32.

bill and phrased their draft in positive rather than negative terms.²⁷

During November, 1945, the Special Committee on Atomic Energy undertook a program of educating themselves concerning atomic energy and the Manhattan Project.²⁸ The report prepared by Henry Smyth was studied extensively by the Special Committee in its attempt to better understand what they were about.²⁹ The Army, however, was not very cooperative when it came to releasing data for scrutiny by the Special Committee. Consequently, a great deal of animosity arose between McMahon's committee and the Army.

Finally, after weeks of discussions and revisions, Newman and Miller arrived at the final text of their bill. On December 20, 1945, McMahon introduced the bill in the Senate as S. 1717.³⁰ The final form of the McMahon bill contained the following major provisions:

- 1) The Commission would hold all patents relating to the production of fissionable materials and weapons.
- 2) Divisions of Research, Production, Materials, and Military application would be established with the director of each to be appointed by the President.

²⁷ Ibid.

²⁸ Hewlett and Anderson, op. cit., p. 449.

²⁹ The Smyth report is discussed in Chapter I.

³⁰ Congressional Record, op. cit., part 9, 12406.

- 3) An Atomic Energy Commission would be established composed of five full-time members.
- 4) Members of the Commission would be appointed by the President and confirmed by the Senate.³¹

The McMahon bill, in its version introduced on December 20, was the product of the combined effort of McMahon's committee, administration officials, and the scientific community. Their purpose was to design a bill that would provide a suitable substitute for the War Department bill, which they felt was totally inadequate. S. 1717, however, still faced the rough journey through Congress.

S. 1717 in Congress

Extensive hearings on S. 1717 began before the Special Committee on January 22, 1946.³² The first testimony was heard from Harold D. Smith, the Director of the Bureau of the Budget. Smith expressed his acceptance of the basic principles of the bill, but as an administrative expert he offered one main revision. He agreed that the members of the Commission should be full-time officials, but he felt that a membership of three would be more efficient.³³ Smith's reasoning was that the "smaller the number of members

³¹U.S., Congress, House of Representatives, Military Affairs Committee, Report to Accompany S. 1717, H. Rept. 2478, 79th Cong., 1st Sess., 1945, p. 8.

³²U.S., Congress, Senate, Special Committee on Atomic Energy, Hearings on S. 1717, 79th Cong., 2d Sess., 1946, p. 1.

³³Ibid., p. 38.

on the board the more attractive the positions will be to men of the highest ability."³⁴

Smith did not make as many recommendations as might be expected from someone who had been so long involved in public administration. The reason for this is, however, quite clear. Don K. Price, representing the Bureau of the Budget, had met privately with Newman and Miller just prior to the final revision of the McMahon bill.³⁵ Price suggested several changes in the bill at that time. The most important to him was a provision calling for a general manager to direct the staff of the commission and carry out commission policy.³⁶ Newman and Miller accepted this suggestion, among others, and placed it in the final draft. Consequently, for all practical purposes, the Bureau of the Budget was satisfied with S. 1717.

At this time Truman and the War Department were nearing a final rift. Newman sent a memorandum to the White House on January 25, 1946, and the President promptly signed it.³⁷ The memorandum expressed Newman's belief that the bill being discussed before the Special Committee contained principles that were essential to the successful control of atomic energy. Since Truman had thus privately accepted

³⁴ Ibid.

³⁵ Hewlett and Anderson, op. cit., p. 483.

³⁶ Ibid., p. 484.

³⁷ Ibid., p. 489.

S. 1717 and administration officials, such as Henry Wallace, Secretary of Commerce, were publicly endorsing the bill, the McMahon group now sought a public statement from the President.

Consequently, McMahon requested that Truman advance his opinion concerning atomic energy legislation. On February 1, 1945, the President released a copy of his reply to Senator McMahon to the press.³⁸ In the letter, Truman enumerated what he felt were the essential elements of atomic energy legislation. He advocated the following principles:

- 1) The members of the commission should be full-time Government employees.
- 2) The Government should be the exclusive owner and producer of fissionable materials.
- 3) Any legislation passed must assure freedom to conduct independent research.
- 4) The commission should be exclusively civilian in its composition.³⁹

Even though McMahon had successfully obtained the endorsement of the President, he was not assured of passage

³⁸U.S., Congress, Senate, Special Committee on Atomic Energy, Report to Accompany S. 1717, S. Rept. 1211, 79th Cong., 2d Sess., 1946, p. 7. The letter which Truman signed and released had, in fact, been drafted by Newman.

³⁹Harry S. Truman, Memoirs, Vol. II., Years of Trial and Hope (Garden City, New York: Doubleday Co., 1955), pp. 334-335. The controversy over civilian versus military control and representation with respect to the AEC was the major point of discussion on atomic energy legislation. Due to the magnitude of the controversy, Chapter III deals exclusively with that question.

of his bill. Revisions had to be made to satisfy members of his committee who were opposed to particular provisions. While the Special Committee met in executive session during the month of March, Newman and Miller had been working on a new draft that would incorporate the views of the entire committee. On April 1, 1946, the Special Committee members had before them a revised version of the original bill.⁴⁰ The new draft contained provisions for a general manager, for the directors of the various divisions to be appointed by the commission rather than the President, a general advisory committee, a military liaison committee, and a joint committee on atomic energy in Congress.⁴¹

By Friday, April 11, the Special Committee completed its action on the bill. April 19, 1946, the report of the Special Committee was presented to the Senate.⁴² With little debate on the Senate floor, S. 1717 soon came to a vote. On June 1, 1946, a voice vote was taken in the Senate and S. 1717 was unanimously passed.⁴³ McMahon had succeeded in getting his bill passed without sacrificing a great deal of the original draft. S. 1717 now faced action by the House.

⁴⁰ Hewlett and Anderson, op. cit., p. 511.

⁴¹ Ibid.

⁴² Congressional Record, op. cit., part 3, 4031.

⁴³ Ibid., part 8, 6098.

S. 1717 Becomes Law

Prompt action by the House on S. 1717 was uncertain. The House had seen its own measure, the War Department bill, swamped by unpopular opinion. They were now being asked to take action on a bill from the Senate before they had even acted on the bill that had been reported out by their own Military Affairs Committee six months earlier.⁴⁴ On June 10, the McMahon bill was referred to the Military Affairs Committee of the House.⁴⁵

The chairman of the Military Affairs Committee, Andrew May, had hoped to report the Senate bill out as quickly as possible so the House could debate amendments made by his committee on the floor.⁴⁶ Other members of the committee, however, chose to discuss each section of S. 1717 in executive session. Therefore, the bill was not reported out until July 10.⁴⁷ Under the Parliamentary rules, S. 1717 went automatically to the Rules Committee from which it was passed on July 13.⁴⁸

The House then resolved itself into the Committee of the Whole to debate S. 1717. During these debates, two

⁴⁴The War Department bill was hopelessly tangled in the Rules Committee of the House at this time.

⁴⁵Congressional Record, op. cit., part 7, 6351.

⁴⁶New York Times, June 13, 1946.

⁴⁷Congressional Record, op. cit., part 7, 8602.

⁴⁸Ibid., 9144.

amendments concerning the structure of the AEC were proposed and adopted. One amendment was to make the director of the division of military application a military officer exclusively.⁴⁹ This amendment was an essential element of H.R. 4566, which was still in the Rules Committee of the House. The other amendment was also an integral part of H.R. 4566 in that it required at least one member of the AEC to be a military officer.⁵⁰

Two amendments were also added with respect to the role of the President in atomic energy control. The amendments provided that the President could direct the commission to deliver quantities of fissionable material to the armed forces when he felt it was in the interest of national security and he could direct the commission to authorize production of atomic weapons by the military.⁵¹ The House adopted seventy-one amendments in all, including those made by the Military Affairs Committee, but the majority of them were technical, clerical, or concerning the powers of the commission.⁵² With these changes, the House adopted the bill by a vote of 265 to 79.⁵³

⁴⁹ U.S., Congress, House of Representatives, Conference Committee on S. 1717, Report of Conference Committee on S. 1717, H. Rept. 2670, 79th Cong., 2d Sess., 1946, p. 6.

⁵⁰ Ibid.

⁵¹ Ibid., p. 7.

⁵² The powers of the Commission are discussed in Chapter IV.

⁵³ Congressional Record, op. cit., part 8, 9563.

The next step was, of course, the conference committee that would have the task of reaching a compromise. The conferees held their first session on July 23.⁵⁴ With regard to the amendments concerning military representation, the Senate receded on the one requiring that the director of the division of military application be a member of the armed forces and the House receded on its amendment requiring military representation on the commission. The Senate also receded on both amendments concerning the President.⁵⁵ S. 1717 now returned to the Senate and House for final action.

S. 1717 won quick approval from the Senate and from the House after more discussion on its merits and faults. Chief opposition in the House stemmed around the claim of some members that the bill was supported by Communists. That opposition was easily overcome, however, because adjournment was near and most Congressmen were anxious to pass some legislation to control atomic energy. Claire Booth Luce, who had earlier expressed fear that the bill was socialistic in its provisions of government ownership, summed up the feelings of most members of the House when she stated, "We must support it (S. 1717) because nuclear

⁵⁴ Ibid., part 8, 10193. Conferees from the House were May, R. Ewing Thomason, Carl T. Durham, and Charles Clason. Senate conferees were Arthur Vandenberg, McMahon, Eugene Millikin, Edwin Johnson, and Richard Russel.

⁵⁵ H. Rept. 2670, op. cit., p. 7.

energy, still in its infancy, contains horrible powers for mass destruction."⁵⁶

A compromise was thus achieved by which the majority of the members of Congress were satisfied. The bill was signed by both houses and presented to Truman on July 29 for his signature. On August 1, 1946, the President signed the Atomic Energy Act of 1946 into law.⁵⁷ It had taken approximately one year for the Atomic Energy Act of 1946 to proceed from its beginning in the Interim Committee to law. During that year, the combined efforts of many people had shaped and revised the various proposals into a final draft that won the approval of a vast majority. The significance of this episode is apparent. The following words excellently describe what had occurred in that year:

. . . many thousands of Americans had expended millions of words in public debate on domestic control. The final bill was not what any single one of them would have written. Yet, it was probably better than any individual could have produced. In this fact, perhaps, lay the secret vitality of American democracy.⁵⁸

The Final Structure of the AEC

In summary, the final AEC structure should be examined as it appears in Public Law 585, the Atomic Energy Act of

⁵⁶ Congressional Record, op. cit., part 7, 9261.

⁵⁷ Ibid., part 8, 10619.

⁵⁸ Hewlett and Anderson, op. cit., p. 530.

1946.⁵⁹ The AEC could have taken several different forms with regard to the composition of the Commission itself. Alternatives open to Congress were a part civilian, part military commission; a part-time commission; a mixed commission of part-time Cabinet officers and full-time commissioners; and a commission of nine or more members designed to represent various segments of society. The final structure of the AEC involved a full-time, five-man commission appointed by the President, with the consent of the Senate, for a term of two years. Four of the commissioners would be paid \$15,000 per year and the fifth, the chairman, would be compensated \$17,500 per year.⁶⁰

The Atomic Energy Act of 1946 also provided for a general manager to be appointed by the President and confirmed by the Senate at a salary commensurate with that of the commissioners. The Commission was provided with advisory powers to the President with regard to the appointment or removal of the general manager. Responsibility of carrying out Commission policy and directing the Commission staff was assigned to the general manager.⁶¹ Public Law 585 also contained provisions for four divisions, Research, Engineering, Production, and Military Application,

⁵⁹The Military Liason Committee is purposely omitted in the summary because it is discussed in Chapter III.

⁶⁰U.S., Statutes at Large, DX, 755.

⁶¹Ibid.

with each division director to be appointed by the Commission at a salary of \$14,000 per year.⁶²

A General Advisory Committee was established by the act to be composed of nine part-time members. The purpose of the General Advisory Committee was to advise the Commission on research, scientific and technical matters relating to production, and development of atomic power. Members of the Committee were appointed by the President and required to meet together at least four times a year.⁶³ Assurance of independent advice of this nature enabled the Commission to avoid specialization of members in one particular phase of the program.⁶⁴

A bipartisan congressional Joint Committee on Atomic Energy was also established by the law. The Joint Committee was empowered by the act to make studies on its own initiative, review legislation, hold hearings, make reports to Congress, and keep itself informed with respect to the Commission's activities. To facilitate the provision, the Commission was required to submit semiannual reports on all aspects of Commission operations.⁶⁵ The provision for a

⁶² Ibid., 755-758.

⁶³ Ibid.

⁶⁴ Richard O. Niehoff, "Organization and Administration of the United States Atomic Energy Commission," Public Administration Review, VIII (Spring, 1948), p. 93.

⁶⁵ Statutes at Large, op. cit., 773. This requirement was later changed to yearly reports.

Joint Committee assured Congress that there would be no gap between the Commission's policies and congressional policies.

The President was also involved in the functioning of the atomic energy program beyond his appointive and removal powers. First, the President was directed to determine at least once a year the quantities of fissionable material to be produced by the AEC. Second, production of atomic weapons was to be carried on only to the extent allowed by Presidential consent. Third, the President was empowered to direct the Commission to deliver fissionable materials or weapons to the military as he deemed necessary.⁶⁶ Thus the President was given a great deal of responsibility with regard to the atomic energy program. The President, however, did not have the facilities to allow him to consider top level problems in this area until the National Security Council was established in 1947.⁶⁷ This, however, was only a period of about three months.

The account of the formulation of the Atomic Energy Act is a stirring tribute to American democratic principles. Congress was given the task in 1945 of distilling countless ideas concerning the three main areas of debate over atomic energy control, the structure of the AEC, the role the

⁶⁶Ibid., 760-763.

⁶⁷Morgan Thomas, Atomic Energy and Congress, (Ann Arbor: University of Michigan Press, 1955), p. 13.

military would take, and the powers the commission should have. To place the responsibility for the eventual act, is an impossible task. It was the result of a combined effort of many people who were all genuinely interested in obtaining the legislation that was essential. The framework that finally housed the AEC is obviously the product of many views that have been distilled into one functioning organization. The democratic governmental process has perhaps never been illustrated more aptly than it was with the passage of the Atomic Energy Act of 1946. A framework was created which allowed the necessary governmental control, checked by the elected representatives of the people.

CHAPTER III

THE ROLE OF THE MILITARY IN THE AEC

The Controversy

The greatest question facing Congress during the discussions on control of atomic energy was that of the role of the military. Most persons agreed that the military should have some voice in the future of atomic energy, but not a dominant one. There also seems to have been an almost fanatical opposition to the military having any form of control. Congressman Ellsworth B. Buck of New York stated that ". . . if this legislation is now postponed, the military are left in sole control of a force so awful as to endanger the very existence of the world."¹

Secretary of Commerce Henry Wallace, testifying before the Special Senate Committee on Atomic Energy, expressed the fear that military participation could,

. . . place the people of this nation and even of the world at the complete mercy of a small group of men, perhaps a military clique, who could use this power to impose new and more terrible forms of authoritarianism and imperialism.²

¹U.S., Congressional Record, 79th Cong., 2d Sess., 1946, XCII, part 7, 9379.

²U.S., Congress, Senate, Special Committee on Atomic Energy, Hearings on S. 1717, 79th Cong., 2d Sess., 1946, p. 223.

General Groves, the military Director of the Manhattan Project, was heavily criticized, also. Groves, and his staff, were accused of being contemptuous and ignorant of what the work was about.³ Fielding Eliot, writing in the New York Herald-Tribune, addressed himself to Groves in the following statement:

It is our lives you are playing with, General. It is our country's future. And we'd like, if you have no objection, to continue to have these affairs of ours controlled under the arrangements we have found satisfactory for the last century in the Constitution of the United States.⁴

Statements such as these were made in what appears to have been a situation adequately described by the Washington Post's "atomic hysteria." Unfortunately, the military was chastised most unfairly. The fact was that the military did not want to control atomic energy. There was general agreement among most Congressmen and the military that atomic energy should be controlled by civilians. General Groves had, in fact, made the following statement before the House Military Affairs Committee at the beginning of its hearings:

We are appealing for an opportunity to give you our existing powers. In the interest of the war effort, there was delivered into our

³Washington Post, March 22, 1946.

⁴New York Herald-Tribune, March 26, 1946.

care the responsibility for directing all activities relating to the release and use of atomic energy. But the individual responsibility that was desirable in wartime should not be continued today. . . and the problems requiring solution are so fundamental that control should be vested in the most representative body our democratic society is capable of organizing.⁵

Groves felt, however, that the military should not be completely excluded from the future of atomic energy. He expressed his desire that the commission have a civilian majority because ". . . it would be adverse to the future of the country to have the action of the Commission attacked on the ground that it was a military commission."⁶

The military position was reiterated time and again by General Groves, Secretary of War Patterson, and Secretary of the Navy Forrestal. Secretary of the Navy Forrestal agreed with General Groves that the implications of atomic energy rendered it of such importance that it should not be left solely to the military.⁷ Conversely, Forrestal was equally opposed to an organization in which the military had no voice.⁸

The community of scientists offered opposition to a military commission because they felt that it would hinder

⁵U.S., Congress, House of Representatives, Military Affairs Committee, Hearings on H.R. 4280, 79th Cong., 1st Sess., 1945, p. 42.

⁶Ibid.

⁷Hearings on S. 1717, op. cit., p. 84.

⁸Ibid.

their research activities. Several of the leading scientists on the Manhattan project, however, including Bush, Compton, and Oppenheimer, voiced the opinion that military representation on the commission would not be undesirable.⁹ The top echelon of the military, however, did not desire that there be a majority of military men on the commission.¹⁰

The majority of the military men argued that since they were charged with national defense, they must have a practical working knowledge of developments in atomic energy that pertained to defense.¹¹ What the military advocated in this respect was some sort of mandatory liaison between the controlling structure and the military, with which they would be in a position of knowing what atomic weapons existed and the types being developed.¹²

Scientists supposedly were diametrically opposed to the idea of military control. Alfred Friendly wrote a series of articles for the Washington Post, in which he alleged that the scientific community feared restriction of interchange of ideas by the use of such devices as wire-tapping and censorship of letters.¹³ Friendly also made

⁹Congressional Record, op. cit., 9341.

¹⁰Ibid., part 8, 10193.

¹¹"What is Congress Doing to Solve the Problem of Atomic Energy?", Congressional Digest, XXV (May, 1946), p. 143.

¹²Ibid., p. 132.

¹³Congressional Record, op. cit., part 12, 4324.

the statement that scientists reported to him that ". . . they could not work on it (atomic energy) under the military control which now operates in the Army's Manhattan district project."¹⁴

These criticisms were not based on logic. In the first place, wide cleavage between the scientists' view and the military view did not exist. Many scientists seemed to have overlooked the fact that the military, upon realizing the inadequacies of their own bill, had supported the McMahon bill. Many scientists testified that they were not opposed to some military control.¹⁵ Also, as it has been noted, the military did not want to control atomic energy as it had during the war. General Groves, when asked if he advocated the perpetuation of military control as it existed under the Manhattan project, replied:

. . . I am not advocating its permanent maintenance; the permanent maintenance of the essentials of our present organization.

I am advocating it until such time as Congress passes some legislation. I am advocating it beyond that point to the time when the body that is given the responsibility over this thing has a chance to really understand what problems it is going to be faced with.¹⁶

¹⁴Ibid.

¹⁵Dr. Vannevar Bush had voiced his approval of H.R. 4566, which was labeled as the War Department Bill. In fact, many of the leading scientists of the Manhattan project endorsed this bill.

¹⁶Hearings on S. 1717, op. cit., p. 48.

Another fact discredits the opposition to the military on the grounds that it would restrict the scientists as it had during the war. The simple fact is that none of the proposed pieces of legislation called for military domination as was the case in the Manhattan project. Even so, fears of a military dictatorship persisted.

The atmosphere of urgency that permeated Congress affected many interested observers, also. It seems to have been an almost chaotic situation. No doubt the accounts of the destruction wrought by the atomic bomb in Japan caused great consternation among many people. Consequently, the chastisement of the military seems to have been prompted by fear. The military was criticized and accused unfairly. Thoughts and suggestions of the military were often either misrepresented or misinterpreted.

Civilian control of the military has been a principle of American government for many years. When the question of the controlling of atomic energy arose during peacetime, the concept of civilian control was reemphasized. The military, however, endorsed civilian control of atomic energy. Again and again military officials declared that they would be satisfied with an organization that provided for liaison between the controlling agency and the military. Therefore, the final decision that had to be made was not if the military would have a role, but how great a role it would have. This

decision was made after lengthy discussion on the military sections of H.R. 4566 and S. 1717.

H.R. 4566 and the Military

H.R. 4566 was often referred to as the War Department bill because it was drafted by a committee that was appointed by the Secretary of War. The military provisions of H.R. 4566 provided that at least one, and as many as two, members of the armed forces should be on the commission to control atomic energy. Nine members would comprise the entire commission and of these only two would be members of the armed forces. The military would also be given the authority to manufacture as many atomic bombs as they desired, with the consent of the President.¹⁷

Opposition to these two facets of H.R. 4566 was overwhelming. The most prevalent opposition of H.R. 4566 was that it was inconsistent with our concept of democratic government. On the surface, it does not seem that limited membership of the armed forces on the Atomic Energy Commission would be undemocratic. Upon closer examination, however, it appears that the May-Johnson bill did contain certain elements that could have developed into a situation that would be detrimental to our democratic way of life.

¹⁷ Congressional Record, op. cit., part 7, 9349.

The principal objection was in the provision requiring at least one of the members of the AEC to be a member of the armed forces. Since the commission was to be established as a policy-making body, the provision to have military representatives on the commission would have, in effect, placed the armed forces in a policy-making position. This, of course, would have violated principles that had been instituted as far back as 1870 when a statute was passed prohibiting military officers from holding civilian positions in the government.¹⁸ As Congressman R. Ewing Thomason stated:

There would be just as good argument to have a General Secretary of War or an Admiral as Secretary of the Navy, or that the man in the White House is not to be a civilian, because that has been the policy of our government from the beginning.¹⁹

It would not seem that having only one or two military members on the commission would affect policy-making to a great extent. Estes Kefauver of Tennessee pointed out the possible dangers in the following statement:

I do not think one military man on the commission or two military men would necessarily sway the decisions that will be made. But I do say that would be a very bad principle for us to start at this late hour in connection with this matter when the eyes of the world are upon us to see whether we are going to follow our traditional

¹⁸Washington Post, op. cit., March 24, 1946.

¹⁹Congressional Record, op. cit., part 8, 10193.

democratic system or whether we are going to gradually drift toward a military government.²⁰

Kefauver went on to point out that if one or two military men were allowed to be on the commission, it would set the stage for an increase in their authority at a later date.²¹

Kefauver's point was well taken. The responsibility that faced Congress was one of a long-range nature. In legislating for the control of atomic energy, it was necessary to create an organization with a structure that would stand the test of time. In order to assure that atomic energy would remain in the hands of civilians, the most sensible course to follow was to insure military participation in the controlling agency, but not in a policy-making capacity.

Certainly, it was desirable to construct a commission which would not have inherent traits of militarism. For all practical purposes, however, the question of whether atomic energy would be controlled by civilians or the military was decided in 1787 when the Constitution of the United States was written. It remained the task of Congress in 1946 to devise a method by which the military could perform its vital function in atomic energy research and development without endangering our democratic institutions.

²⁰ Ibid., part 7, 9349.

²¹ Ibid.

H.R. 4566, for obvious reasons, was not adequate with respect to safeguarding against possible military domination in the future. It served a useful purpose in that it illustrated the fact that the military should have a voice in atomic energy. While military experts were expressing their view that the armed forces should participate in the future of atomic energy, the Senate was in the process of formulating a bill which excluded the military. No doubt the arguments presented in favor of participation by the military had some effect on the members of the Special Senate Committee on Atomic Energy. In other words, H.R. 4566 and S. 1717 represented both ends of the spectrum, from which a satisfactory compromise was reached.

S. 1717 and the Military

S. 1717, the McMahon bill, provided for complete civilian control of atomic energy in its original form. No provision was made for a representative of the armed forces to be involved in any part of the AEC structure. Obviously, this was not satisfactory because the military would have to use the weapons if they were to be used at all. Common sense dictated that such a possibility required military advice and participation in the Commission.

Secretary Forrestal advanced his opinion with regard to the necessity of military participation by saying that the ". . . War and Navy Departments should have the duty

of the design, the development and the combat use of the vehicle, and the weapon as a whole."²² Forrestal went on to say:

We think the fact that there is no mandatory liaison or exchange provided between the State, War, and Navy Departments is a gap. It seems to me, as far as I am concerned personally, that this is so related, just as our military power is inextricably related, to diplomatic policy.²³

Testimony of this nature given before the Senate committee apparently persuaded them that some sort of provision had to be made so that the military would receive proper attention. One of the members of the Committee, Senator Vandenberg of Michigan, proposed an amendment to the original text of S. 1717 in which provision was made for a military liaison committee.²⁴ The vote in the Committee was ten to one in favor of adoption with the only dissenting vote being cast by Senator McMahon.²⁵

The amendment of Senator Vandenberg contained several important provisions. A military liaison committee was called for consisting of representatives of the Departments of War and Navy assigned by the Secretaries in such numbers

²²Hearings on S. 1717, op. cit., p. 73.

²³Ibid.

²⁴Congressional Record, op. cit., 9340.

²⁵Congressional Digest, op. cit., p. 147.

as they determined.²⁶ Also, the commission would be required to advise and consult with the committee on all matters which the committee deemed to be related to military applications.²⁷

The Vandenberg amendment further provided that the commission keep the committee fully informed of all matters before it and the committee would keep the commission informed of all atomic energy activities in the War and Navy Departments.²⁸ The final provision of the amendment bore particular significance. It provided that,

If the Committee at anytime concludes that any action, proposed action, or failure to act of the Commission on such matters is adverse to the responsibilities of the Departments of War or Navy, derived from the Constitution, laws, and treaties, the Committee may refer such action, proposed action, or failure to act to the Secretaries of War and Navy. If either Secretary concurs, he may refer the matter to the President, whose decision shall be final.²⁹

Consequently, the final authority on any dispute between the commission and the military would be the President, a civilian. The operation of the commission would thus include the military, but with definite emphasis on civilian finality. Vandenberg's amendment actually

²⁶ Congressional Record, op. cit.

²⁷ Ibid., 9341.

²⁸ Ibid.

²⁹ Ibid.

provided for a system of checks and balances, a principle which is fundamental in the success of our democratic government.

Opposition to the Vandenberg amendment and the military liaison committee came primarily from the chairman of the new Senate Committee on Atomic Energy, Senator McMahon. Senator McMahon made the following statement, with regard to the amendment, on a nationwide radio broadcast:

. . . it is now proposed that a military liaison board will have the power to hold up for review, and take to the President for decision, every proposed action of the civilian commission. This would exalt the military to a position of authority in our national affairs unprecedented in our history, repugnant to our traditions, and destructive to our principles.³⁰

McMahon went on to state that if the right of review were given to the military, our government would not be long for this world.³¹ Did not Senator McMahon realize that the President of the United States was a civilian? Under the Vandenberg amendment, the military was to be involved as an advisory group in the administrative structure.³² The Special Senate Committee, in reporting favorably on S. 1717, stated that the Vandenberg amendment

³⁰Congressional Digest, op. cit.

³¹Ibid.

³²Morgan Thomas, Atomic Energy and Congress, (Ann Arbor: University of Michigan Press, 1956), p. 14.

was adopted ". . . to give the armed forces a proper voice in such matters as development, manufacture, storage, and use of bombs. . . ." ³³

Favorable opinion toward the Vandenberg proposal was clearly evident as the Senate passed S. 1717 unanimously.³⁴ H.R. 4566, which called for military membership on the commission, was at this time in the Rules Committee of the House.³⁵ To expedite passage of S. 1717, Senator McMahon requested a conference committee of the two houses on July 22, 1946.³⁶ It was in this conference committee that the last compromise, which resulted in the final structure of the AEC, was achieved.

The Role of the Military in the Atomic Energy Act of 1946

The purpose of conference committees in the United States Congress, as is well known, is to reach agreement on legislation passed in one house or the other. When the conference committee met to consider S. 1717, the purpose

³³U.S., Congress, Senate, Special Committee on Atomic Energy, Report to Accompany S. 1717, S. Rept. 1211, 79th Cong., 2d Sess., 1946, p. 12.

³⁴Congressional Record, op. cit.

³⁵Ibid., 9340. H.R. 4566 was to never be reported out of the Rules Committee.

³⁶Ibid., part 8, 10193. The conferees from the House were A. J. May, R. Ewing Thomason, Carl T. Durham, and Charles R. Clason. Senate conferees were Arthur H. Vandenberg, Brien McMahon, Eugene Millikin, Edwin Johnson, and Richard Russell.

for which conference committees were established was excellently illustrated. The House conferees came to the Committee with their version of military participation and the conferees of the Senate with theirs.

The Conference Committee on S. 1717 issued its report on July 26, 1946, with significant changes in the bill.³⁷ One amendment of particular importance concerning the military was adopted. The House receded on its amendment to S. 1717 that required a member of the armed forces to be on the AEC.³⁸ In return, the Senate receded on the House amendment that would require the director of the division of military application to be a military officer.³⁹

With the provision for a military liaison committee and the requirement that a member of the armed forces be the director of the division of military application, the military was given the necessary participation it desired, without sacrificing civilian control.⁴⁰ In the case of the division of military application, as with the military liaison committee, ultimate authority rested with a civilian official. Since the division of military application was

³⁷Ibid.

³⁸U.S., Congress, House of Representatives, Report of the Conference Committee on S. 1717, H. Rept. 2670, 79th Cong., 2d Sess., 1946, p. 6.

³⁹Ibid.

⁴⁰Thomas, op. cit.

one of four divisions established within the AEC, it was to be directly responsible to the civilian commission.

After S. 1717 was amended in the conference committee, it was sent to the House and Senate for final approval. Passage by the Senate was unanimous and rapid. In the House, lengthy debate was begun on S. 1717. The most vigorous proponent of passage for S. 1717 in the House was Representative E. Ewing Thomason of Texas. Speaking of the compromise on the military role, Thomason said, ". . . I think it is in keeping with our tradition, because the Director of Military Application is not going to be a policy maker."⁴¹

Thomason was especially pleased with the military liaison committee aspect of S. 1717. In attempting to persuade his colleagues of the value of such an arrangement, Thomason made the following appraisal:

I would like for someone to tell me what is wrong with that. Here we are a civilian Government; we are not a military Government and never will be, I hope. . . . This government was not founded under any such theory. . . .⁴²

Thomason was making special reference to the fact that the President had the final authority on conflicts between the commission and the military.

⁴¹ Congressional Record, op. cit.

⁴² Ibid., part 7, 9341.

The major objections that were raised to S. 1717 in the House were that the House conferees had not been strong enough in pushing the essentials of H.R. 4566 and that so-called "Communists" had testified in favor of the bill. Thomason was very vigorous in answering these objections. With regard to the first objection, Thomason said, "the compromise -- and that is why we have conference committees -- was that the Senate was willing to accept the amendment that the Director of Military Application . . . should be a member of the armed forces."⁴³

Objections that the House conferees had not done their job well were unfounded when one considers that the military was completely satisfied with S. 1717. Thomason had the Conference Report sent to General Eisenhower and he received a phone call shortly thereafter in which Eisenhower stated that he and the War Department were entirely satisfied with the conclusions reached by the conferees.⁴⁴ Thomason also stressed the high esteem in which the Senators on the conference committee were held.

With regard to allegations that Communists were in favor of S. 1717, Thomason pointed out the obvious.⁴⁵

⁴³ Ibid., part 8, 10193.

⁴⁴ Ibid.

⁴⁵ In alleging that Communists were in favor of S. 1717, some of the members of the House made references to the rumor that David E. Lilienthal would be the first head of the AEC. Lilienthal, because of his connection with the Tennessee Valley Authority, was labeled a Communist by many people.

I do not understand how some of those who have spoken about the Communists and these other red herrings they have dragged across the trail, can believe as they do with the amendment proposed by Senator Vandenberg.⁴⁶

Thomason was undoubtedly correct. How could some members of Congress believe that a bill passed by distinguished members of the Senate and favored by such persons as General Eisenhower, Secretary of War Patterson, and even the President himself be Communist inspired?

With respect to the objection to Mr. Lilienthal as the possible first head of the commission, Thomason stated:

There are a lot of people for this bill. They are not all crackpots, either. Not only that, but you cannot draw a red herring across this trail by getting up and then asking 'Will this gentleman yield?' and then asking 'Is it not a fact that Lilienthal is going to be a member of this Commission?'. Well, I am sure there have been no committments as yet. I do not know anything about Lilienthal except he has made a success of the greatest enterprise of its kind in the world.⁴⁷

Undoubtedly, Congressman Thomason played a great role in securing passage of S. 1717 in the House. His expertise in guiding the bill through the House should not go unmentioned.

On July 29, 1946, S. 1717 was passed by the House and presented to President Truman for his signature, which he

⁴⁶ Ibid.

⁴⁷ Congressional Record, op. cit., part 7, 9341. He was, of course, referring to Lilienthal's being chairman of the directors of the TVA.

affixed on August 1, 1946.⁴⁸ With the signing of the Atomic Energy Act of 1946, the elements of the compromise concerning the military were transformed into law. The importance of this phase of the legislation is perhaps the greatest of the entire act. In its final form, the act provides for the answer to a complex question in a relatively simple manner.

In summary, the military was given a voice in the future of atomic energy through two administrative bodies of the AEC, the Military Liason Committee and the Division of Military Application. The Military Liason Committee serves as the main link between the Commission and the military. The importance of the Committee cannot be over-emphasized. If atomic weapons are going to be used, they will be handled by the military. It seems only sensible, therefore, that the military should be aware of developments in atomic energy. In the words of Richard Niehoff, the Atomic Energy Act "clearly sets forth the pattern of working relationships which must be maintained between the civilian commission and the armed forces."⁵⁰

The operation of the Military Liason Committee is an administrative masterpiece. Any proposed action of the AEC

⁴⁸Ibid., part 9, 12406.

⁴⁹Richard Niehoff, "Organization and Administration of the United States Atomic Energy Commission," Public Administration Review, VIII (Spring, 1948), p. 96.

concerning atomic weapons has to have the approval of the military, but the military remains definitely subordinate to the civilians. Obviously, H.R. 4566 contained the possibilities of the worst consequences.⁵⁰ The Vandenberg amendment to S. 1717, however, provided an administrative arrangement that was totally acceptable. Under the Atomic Energy Act of 1946, the members of the Military Liason Committee were authorized to appeal to their civilian superiors, the Secretaries of War and the Navy, if they were dissatisfied with any action of the Commission. The Secretaries could then appeal to the President if they so desired. It is apparent that the civilian facet of the military was dominant with respect to the atomic energy program.

These provisions provided an acceptable administrative structure in which the military has definite powers, but these are limited by the civilian Secretaries and the President. To say that this procedure is ingenuous is not an overstatement. It would have been very easy for Congress to have established a complex system by which the military would have been fettered by procedure and "red tape."

The Division of Military Application was devised to be entirely military in its structure. This fact did not make the Commission militaristic by any means. The appointment of the director of the division was to be made by the

⁵⁰See Kefauver's remarks cited above concerning the possibility of a military government coming from H.R. 4566.

Commission and he would be directly responsible to it.

Niehoff described the Division as ". . . of key importance as a recognition of the need for technical military participation in an agency essential to the military defense of the United States."⁵¹

Fears expressed by members of Congress of a military government have not materialized. If the future of atomic energy had been entrusted entirely to the military, these fears could have transpired. The administrative structure that was established, with the President at the top, has prevented any such occurrence. The actions of Congress in dealing with the problem of the military role in peace-time atomic energy should not go unheralded. The efforts of the Thomasons, Vandenberghs, and the McMahons should also be praised.

The statement was made again and again by the members of Congress that the legislation concerning atomic energy was the most important ever considered by that distinguished body. When Congress had finished its task, an act had been passed that no doubt affected the lives of millions of Americans.

With regard to the traditions of civilian-military relations in the United States, the Atomic Energy Act of 1946 offers an excellent case study. In every aspect of

⁵¹Niehoff, op. cit., p. 97.

military participation in atomic energy, the military is subordinate to civilian officials. It was the intention of the founding fathers that we would not have a military government. The Seventy-Ninth Congress reasserted the wishes of many generations of Americans by providing an act for the control of atomic energy that would assure the continuation of civilian supremacy.

The episode of the establishment of the military provisions in the Atomic Energy Act of 1946 also pays great tribute to the military leaders of the United States. For the entire course of the proceedings concerning the control of atomic energy, military leaders expressed their belief that the controlling agency should not be militaristic in nature. The military leaders themselves had great respect for the cherished American tradition of a civilian controlled military.

CHAPTER IV

POWERS OF THE AEC

Early Proposals

The powers of the controlling agency were also included in early proposals concerning atomic energy. Bush and Conant, in their OSRD proposal, advocated unprecedented powers for a peacetime agency. They suggested that the commission would control the construction and operation of all production plants, all nuclear experiments involving significant amounts of fissionable material, and have the authority to undertake these activities in their own facilities or through private contractors.¹

In 1945, Bush made revisions in his plan and presented it to the Interim Committee. He included in this plan a National Research Foundation that would formulate national research policies. Within the foundation, would be a division of national defense which was to be staffed by military officers.² Bush's proposals were meant to allow the foundation and the commission to work together. The

¹Richard G. Hewlett and Oscar E. Anderson, The New World, 1939-1946, Vol. I, A History of the United States Atomic Energy Commission (University Park, Pennsylvania: Penn State Press, 1962), p. 409.

²Vannevar Bush, Science, the Endless Frontier (Washington: U.S. Government Printing Office, 1945), p. 198.

commission's duty would be to control the uses of atomic energy and advise the President while the foundation would encourage independent research.³

While Bush and the OSRD were formulating suggestions for legislation concerning research, Senator Harley M. Kilgore and his Subcommittee on War Mobilization were devising their own plan. Kilgore's bill would provide a new government agency with a director to be appointed by the President.⁴ This was the point of difference between Kilgore's proposal and the one of Bush. Under Bush's plan, the National Science Foundation would elect its own executive.⁵

These early proposals concerning atomic energy and scientific research in general also brought out a difference of opinion concerning patents. Kilgore's group believed that traditional patent policy should not apply to government research so that any project financed by public funds would be free from patent restrictions.⁶ Bush, however, did not agree. He believed that while the government should retain a royalty-free license for governmental purposes

³Hewlett and Anderson, op. cit., p. 411.

⁴Don K. Price, Government and Science, Their Dynamic Relationship in American Democracy (New York: New York University Press, 1954), p. 150.

⁵Ibid.

⁶Hewlett and Anderson, op. cit., p. 410.

under any patents arising from foundation research, the government should not require that all rights of such discoveries be the exclusive property of the government.⁷ Such a requirement, according to Bush, would force private research laboratories to refuse federal grants to continue work on a project in which they had already invested large sums of money.⁸

The early proposals of Kilgore and Bush are significant in that the issues involved concerning research and patents were to be the same issues that would be debated when bills were introduced for the control of atomic energy. The two main questions, although they were overshadowed by the publicity given to the military issue, were the powers of the commission with respect to research and patents. Certainly, the framework devised would not be useful if careful scrutiny was not given to the powers of control of the commission.

The War Department Bill and Commission Powers

The War Department bill had its origin in the Interim Committee.⁹ Royall and Marbury's draft resembled the OSRD proposals with respect to commission powers as well as

⁷Price, op. cit., p. 49.

⁸Ibid.

⁹See Chapter II.

structure. This bill would give the commission custody of all raw materials and deposits, all plants, facilities, equipment, technical information, and patents.¹⁰ The administrator of the commission would also be given sweeping powers. The administrator's powers would be:

- 1) He would be authorized to conduct atomic research with commission facilities or through contracts.
- 2) He could control all research activities in other government agencies except military research.
- 3) He could acquire any property or facilities for commission research.
- 4) He could, with commission approval, license all property to other government agencies or other persons.¹¹

The Royall-Marbury draft went even further. It would be unlawful for any person to conduct atomic research without commission consent. Even if the commission gave its approval for such research, it would have the authority to direct, supervise, regulate, and inspect the project.¹² Obviously, these provisions granted the commission unprecedented powers.

Before the Royall-Marbury draft was to be presented in Congress, the Army made some minor changes with respect to the commission's powers. In place of granting the

¹⁰ Hewlett and Anderson, op. cit., p. 412.

¹¹ Ibid., p. 413.

¹² Ibid.

commission strict supervision over private research, the Army lawyers placed a provision outlawing private research that would involve releases of atomic energy dangerous to public safety. The commission, however, would decide when this was the case.¹³

These provisions comprised the essentials of the War Department bill when it was introduced in Congress in October, 1945. When hearings were held on the bill, the scientists testified in favor of the bill, most of them agreeing with its general provisions. The only scientist to make specific criticism of the bill to the Military Affairs Committee was Dr. Harold Urey. In a letter to the Committee, Urey expressed his fear that the commission and the administrator would simply be too powerful with respect to controlling research.¹⁴

Although the scientists who had been involved in the drafting of the bill endorsed it before the Military Affairs Committee of the House, they did not represent the scientific community as a whole. When scientists read the provisions of the bill concerning control of research, the reaction was one of deep concern. Scientists were dismayed and many felt that they had been betrayed in the War Department bill by their friends in Washington.

¹³Ibid., p. 415.

¹⁴U.S., Congress, House of Representatives, Military Affairs Committee, Hearings on H.R. 4280, 79th Cong., 1st Sess., 1945, p. 135.

The National Academy of Sciences led the scientific community's assault on the bill. In a resolution signed by 200 members of the Academy, it was stated that enactment of the War Department bill would:

- 1) Jeopardize our democratic institutions.
- 2) Frustate fundamental research necessary to maintain American leadership in the development of atomic energy.
- 3) Set up an authority in the United States responsible to no one -- not even to the President or Congress.¹⁵

Opposition to the bill also came from several members of the Military Affairs Committee of the House, who issued a minority report when the bill was reported. These men felt that the bill was too vague in its provisions and gave the commission an excess amount of power.¹⁶ The minority report also contained the belief of the signers that the bill was of questionable constitutionality. Citing Schechter v. United States, it was argued that, under H.R. 4566, the Congress would be delegating its legislative powers.¹⁷

Opposition to the bill did not end there. The press

¹⁵U.S., Congressional Record, XCI, part 13, A5534.

¹⁶U.S., Congress, House of Representatives, Military Affairs Committee, Report to Accompany H.R. 4566, H. Rept. 1186, 79th Cong., 1st Sess., 1945, p. 17. The members who signed the minority report were Paul W. Shafer, Dewey Short, Charles H. Elston, L. C. Arends, Charles R. Clason, Ivor D. Fenton, John E. Sheridan, Claire Booth Luce, and Forest A. Harness.

¹⁷Ibid., p. 48.

also took the liberty of chastising the War Department bill with respect to commission powers. The Cincinnati Times-Star of October 25, 1945, printed an editorial concerning the bill entitled "Dictatorship by Commission?".¹⁸ Commission powers in this instance were described as creating the possibility that the commission might become more powerful than the government itself. In conclusion the editorial sounded an admonition that ". . . in our concern to restrain and harness the appalling force of atomic energy we must not invite the tragic consequence of a dictatorship by commission in the United States."¹⁹

Consequently, the War Department bill, because of criticism concerning the structure and power of the commission, lost administration support and was doomed. In this case it may be easily seen how the legislative process in America is truly democratic in nature. Various segments of society were opposed to the bill and they made their opposition known. The scientific community was not rigid in its position on the issue of commission structure. The provisions of the War Department bill concerning commission powers, however, brought the scientists into the fight full scale. Obviously, a better arrangement was necessary regarding commission authority.

¹⁸Congressional Record, op. cit., A4531.

¹⁹Ibid.

Powers of the Commission Under
The McMahon Bill

The McMahon bill had its origin in the draft bill composed by James Newman and Byron Miller. Newman was of the opinion that the War Department bill was inadequate for long range use. He believed that the administrator was too powerful to be appointed by the commission. Newman was also convinced that all patents on devices developed in government sponsored projects should held by the commission, which would grant royalty-free licenses to private users.²⁰

With these inadequacies of the War Department in mind, Newman and Miller drafted their bill. The commission would be authorized to encourage independent research by providing fissionable material free of charge to all persons meeting standards of personal safety and military security. The commission was not to control or restrict independent research beyond these provisions.²¹ The commission would, however, have complete control over the production and utilization of fissionable materials.²²

When McMahon introduced his bill in the Senate in December, 1945, it contained Newman and Miller's ideas together with those of persons they had contacted for advice. With regard to research, the bill provided that the

²⁰Hewlett and Anderson, op. cit., p. 437. For the precise development of the Mc Mahon bill see Chapter II.

²¹Ibid., p. 442

²²Ibid., p. 443

commission should exercise its powers in such a manner to insure the continued conduct of research by private or public institutions.²³

The commission was also to be the exclusive producer of fissionable materials. The Special Committee believed that this was necessary for the following reasons:

- 1) Fissionable material is the principle ingredient of the atomic bomb. Thus, to permit private manufacture of fissionable material would be to permit private manufacture of material of enormous destructive potentialities.
- 2) The production of fissionable material is attended by serious hazards to public health and safety.
- 3) The production of fissionable material is technologically in its infancy; unforeseen and foreseeable factors may play a great part in its development.
- 4) The technology of fissionable material production teaches that even a slight interruption in the manufacturing process may occasion great loss and damage to the entire operation. Government control is more likely to assure continuity of operation than is private control.²⁴

Further, the commission was authorized to confiscate any fissionable material and, in the future, to be the exclusive owner of fissionable materials. The commission could, however, distribute fissionable materials to private institutions for research providing that they meet certain safety

²³ Congressional Record, op. cit., XCI, part 9, 12406.

²⁴ U.S., Congress, Senate, Special Committee on Atomic Energy, Report to Accompany S. 1717, S. Rept. 1211, 79th Cong., 2d Sess., 1946, p. 14.

standards. Licenses would be issued by the commission for these purposes.²⁵

Patent provisions of the McMahon bill also deserve attention because it was on this point that great discussion would occur. S. 1717 provided that all patents involving production of fissionable materials and weapons would be the exclusive property of the commission. Patents concerning devices utilizing atomic energy, however, would be subject to compulsory licensing so as to prevent private monopolies.²⁶

The question of patents was undoubtedly the most complex problem that faced the Special Senate Committee. They had to attempt to understand the legal problems involved while bearing in mind the testimony of such people as George E. Folk, who represented the National Association of Manufacturers. Folk testified that he believed the commission should be given only the power to insure public health and safety.²⁷ The principle of free enterprise was thus expressed to the committee by the business community through such testimony as this. Opposition to the patent provisions of the McMahon bill was also expressed by the American Bar Association.

²⁵ Congressional Record, op. cit., 12407.

²⁶ Ibid.

²⁷ U.S., Senate, Special Committee on Atomic Energy, Hearings on S. 1717, 79th Cong., 2d Sess., 1946, p. 170.

After meeting in executive session, the committee devised its final draft. In its final form, the McMahon bill contained the following principles concerning patents:

- 1) Patents concerning production of fissionable material and weapons would be the exclusive property of the government.
- 2) The commission would be given access to all patents of inventions concerning atomic energy.
- 3) Atomic energy devices could be patented, but exclusive rights to the patent could not be retained by the inventor if it affected the public interest.
- 4) A Patent Compensation Board would be established to decide compensation for patent applications.²⁸

With regard to the control of information, the McMahon bill provided that the commission would control the dissemination of restricted information "in such a manner as to assure the common defense and security."²⁹ The commission would, however, be directed to release technical information in the interest of scientific progress.³⁰ This information, of course, would not be related to the production of fissionable materials or weapons.

The McMahon bill seemed sound even though it advocated powers for the commission that seemed repugnant to American principles. Commission authority under the McMahon bill

²⁸S. Rept. 1211, op. cit., p. 24.

²⁹Ibid., p. 22.

³⁰Ibid. Research and government ownership of fissionable material provisions remained as they were in the draft cited above.

was not, however, as great as in the War Department bill. Section 11, of S. 1717, concerning patents, was to come under heavy criticism when the bill reached the House. Americans were simply not accustomed to having a process as valuable as nuclear energy production owned by the government. It was apparent that opposition would be heavy in the House.

House Amendments on Commission Powers

Stiff opposition, indeed, met S. 1717 in the House. Section 11 was attacked as socialistic and detrimental to established American principles. Congressman Elston opposed the patent provision vigorously. Elston described a bleak prospect.

If anything ever placed shackles on private industry, it is the bill that is before you today. . . . The incentives provided by our present patent system would be destroyed. Section 11 of this bill is un-American and is contrary to the constitutional principle upon which our patent system is founded.³¹

The attack was carried on by Forest A. Harness, who observed that Section 11 placed "in the hands of a five-man commission complete and absolute authority over American industry and the lives of our entire population."³² Clare Booth Luce went to the extreme by saying that the patent provisions of the McMahon bill "might have been

³¹Congressional Record, op. cit., XCII, part 7, 9141.

³²Ibid., 9254.

written by the most ardent Soviet Commisar."³³ Obviously, the House was not going to allow the bill to pass with the patent section unamended.

Fritz G. Lanham, who had been a member of the House Committee on Patents for over twenty years, offered a proposal to amend Section 11. Lanham's amendment provided that the commission could purchase, by condemnation if necessary, all rights to inventions concerning the production or use of atomic energy. When, however, national security was no longer involved, all rights would revert to the owner, subject to nonexclusive license to the government.³⁴ Lanham's amendment was adopted by the House by a vote of 121-57.³⁵

The conference committee consequently faced the task of reaching a compromise on commission structure, military representation, and commission powers with regard to patents. After the heated opposition to patent provisions of S. 1717 in the House, one would be led to believe that the same controversy would rage in the conference committee. Surprisingly, the House receded on the Lanham amendment.

The reason for the House acquiescence to Section 11 may be attributed to the absence of Lanham on the conference

³³Ibid., 9621.

³⁴Hewlett and Anderson, op. cit., p. 527.

³⁵Congressional Record, op. cit., 9553.

committee. Lanham was by far the most experienced member of the House with regard to patents, but he was not named to the committee. The Senate, however, named Senator Millikin of Colorado to the committee. Millikin was convinced of the soundness of the Senate patent provisions and he succeeded in persuading the House conferees that he was right.³⁶ Consequently, S. 1717 remained intact with respect to commission powers and its provisions were subsequently incorporated in Public Law 585.

An Overview of Commission Powers

It is extremely enlightening to examine the powers that were given the AEC by the Atomic Energy Act of 1946 with regard to powers that are exercised by other independent regulatory agencies. This will provide a clearer description of exactly how much power was assigned to the AEC. The six major types of power in which other agencies have authority are investigatory, executive, policy planning, administrative, quasi-judicial, and quasi-legislative.³⁷

The AEC was certainly given investigatory powers. The Commission was authorized to make studies and investigations as it deemed necessary. To facilitate the Commission

³⁶ Hewlett and Anderson, op. cit., p. 529.

³⁷ Robert Cushman, Independent Regulatory Commissions (New York: Oxford Press, 1941), pp. 7-10. Note that Cushman's work was published prior to the advent of the AEC.

in carrying out this function, authority was granted for the Commission to subpoena witnesses to appear at any time and to produce any documents that the Commission deemed necessary.³⁸ This authority, of course, is not unusual for an independent regulatory agency. In the case of the AEC, investigatory powers are definitely comparable to other commissions or agencies.

Executive power was assigned to the AEC by provisions allowing it to report violators of the act to the Justice Department for prosecution.³⁹ Authority of executive nature has taken the form of the AEC's aiding in carrying out the penal provisions of the act. It is apparent that the Commission does not have executive powers that are out of context with those of other commissions.

Policy planning was an integral part of the AEC's functions under the Atomic Energy Act of 1946, also. It was necessary to provide the Commission with policy making powers in order to assure adequate control over atomic energy. The Commission was obviously the only agency that could perform this function with any degree of efficiency. With the General Advisory Committee for technical advice, the Commission would have at its disposal the knowledge necessary to engage in policy planning. With respect to atomic weapons, however, policy making was to rest with the President.

³⁸U.S., Statutes at Large, DX, 755.

³⁹Ibid.

The AEC was also constructed to perform administrative functions. Provisions of the Atomic Energy Act that provided the Commission with control over many areas required a great deal of administrative authority to be exercised. In fact, the overall purpose of the AEC was to control and administer the atomic energy program of the United States. This involved both government research and close scrutiny over private projects in atomic energy.

The AEC was given quasi-judicial authority in addition to its other powers. An example of the quasi-judicial authority of the AEC under Public Law 585 was the Patent Compensation Board. The Patent Compensation Board was set up with the purpose of applying the patent provisions of the law to particular cases. To grant quasi-judicial power to the Commission was not a break with established practices. As in other areas, the Commission was the most capable organization to perform the function.

Finally, quasi-legislative authority was granted to the AEC. The Commission required the power to issue regulations that would have the force of law if it was to be a useful agency. Atomic energy was a relatively new field of research in 1946 and it would have been ridiculous to have required Congress to pass a new statute in every novel situation. With respect to quasi-legislative authority, and all the other powers mentioned, the AEC assumed every major function of previous independent regulatory agencies.

The Atomic Energy Act, however, was designed to deal with a unique situation. Consequently, the AEC was assigned powers that had never been exercised by an independent regulatory agency in the past. One of the most outstanding was the fact that the Commission was given the ownership of a means of production that had tremendous potential uses in many areas. The necessity for such authority was no doubt clear.

Allegations from some members of Congress that the AEC was too powerful and repugnant to American traditions were made with good reason. Atomic energy, however, was a break with tradition. The world had never seen the advent of such a potentially destructive or useful force. To devise a method for the control of such a force, required that tradition be somewhat overlooked, but with proper democratic safeguards.

The AEC was, indeed, given extraordinary authority. One fact, more than any other, condoned such authority. That fact is the extraordinary responsibility of the Commission under the Atomic Energy Act. David Shea Teeple described the power of the Commission by stating that it ". . . has the responsibility for the manufacture of a product upon which the future of our nation and perhaps of all Western civilization might easily depend."⁴⁰

⁴⁰David Shea Teeple, Atomic Energy, A Constructive Proposal (Boston: Little, Brown, and Co., 1955), p. 31.

Certainly, other independent regulatory agencies perform vital functions. Responsibility, though, is the fact that sets the AEC apart from other commissions. Would the United States collapse if the Interstate Commerce Commission or the Federal Communications Commission did not have the proper authority to carry out its function? I think not. The possibility existed in 1946, and exists today, that improper control of atomic energy would have disastrous consequences for America. Was it not better to grant the AEC extraordinary powers rather than to run the risk that its power was not great enough to control atomic energy.

The three facets of the Atomic Energy Act of 1946, the structure of the AEC, the role of the military, and the powers of the AEC, discussed here have been separated for the purpose of convenience. Actually, all three must be considered together. The structure of the AEC would be of no value if it were given no real authority. Similarly, providing for the development and control of atomic energy would not be complete if the military was excluded. Consequently, the three phases of the Atomic Energy Act of 1946 must be considered as interrelated aspects of an overall program. Separation of the three, however, provides a better understanding of their importance.

CHAPTER V

SIGNIFICANCE OF THE ATOMIC ENERGY ACT OF 1946

Significance of the Act

The Atomic Energy Act of 1946 has been discussed with regard to its origin and provisions. Importance must be attached to both of these aspects of the act. First, the act itself. Why is it of value to study the framework within which the AEC operates? Can the AEC possibly affect our daily lives? The answers to these two questions cannot be separated.

There is no doubt that atomic energy affects our daily lives or soon will. The AEC operates in many areas that are vital to individuals and to the nation as a whole. For purposes of illustration, let us examine some of the AEC activities.

The AEC is deeply involved in national security. Research that is carried on by the AEC plays an important role in decisions concerning our nuclear arsenal. The Department of Defense must take into account the nuclear weapons that are manufactured by the AEC when deciding upon alternatives concerning defense policy. By the end of 1965, the AEC was continuing research on warheads to penetrate defense systems, had launched a total of six satellites,

had built fifty-nine nuclear ships, and had forty-five more under construction.¹

A vital function is performed by the AEC through its research facilities and its contractors. The possibilities of using atomic energy in biology and medicine are explored by the AEC. Medical research that is undertaken by the AEC may very well lead to the cure of diseases that have plagued mankind for centuries. Therefore, it is quite possible that research done by the AEC could affect us personally in the future.

Agriculture has benefitted from AEC research, also. Projects have been undertaken by the AEC in the study of the effects of radioactive materials on plant production and fertilizer utilization. Advances have also been made in the study of methods of food preservation and in the elimination of plant diseases and harmful insects. Research such as this is important to everyone.²

The economic effect that the AEC can have on an area was clearly illustrated in the early part of 1967 when a location was chosen for a new cyclotron complex. That area has since expanded tremendously in an economic sense. Real estate values have risen, new businesses are moving in, and the people have bright prospects for the future economy.

¹U.S., Atomic Energy Commission, Sixth Annual Report (Washington: U.S. Government Printing Office, 1966), p. 14.

²David Shea Teeple, Atomic Energy, A Constructive Proposal (Boston: Little, Brown, and Co., 1955), p. 4.

The AEC can definitely affect the growth of an area because of its large expenditures.

AEC influence in economic growth is not limited to particular areas. Research done by the AEC has brought about many advances in industrial uses of atomic energy. Perhaps the most striking AEC accomplishment in economic terms are the reactors that are already producing electrical power. By 1963, AEC-built reactors were producing 1,000,000 kilowatt hours of electricity per year.³ Peaceful uses of nuclear explosives have also been studied by the AEC through its projects Plowshare and Gas Buggy.⁴

The AEC has also encouraged the mining industry in the United States. Mining of uranium was only a small enterprise in the United States before the establishment of the AEC. Since the AEC began research in mining of uranium and started using fissionable material in many projects, the mining of uranium has become a billion dollar industry. The AEC has also developed new mining methods that may be used in the mining of other elements.

Education is definitely affected by the AEC through various means. The Commission is involved with many leading

³U.S. Atomic Energy Commission, Fourth Annual Report (Washington: U.S. Government Printing Office, 1964), p. 8.

⁴U.S. Atomic Energy Commission, Third Annual Report (Washington: U.S. Government Printing Office, 1963), p. 7. Plowshare is being undertaken to study possible uses of nuclear explosions for building canals. The Gas Buggy project studies the possibility of using nuclear explosives to release natural gas deposits.

universities and colleges through contracts, grants, and fellowships. Libraries of many universities have been strengthened greatly by being chosen as depositories for AEC publications. Consequently, the student, especially in the natural sciences, has been aided greatly by the AEC.

Finally, the civil defense program in the United States depends on the AEC to a great extent in its function. Tests of nuclear explosives undertaken by the Commission have provided valuable information for civil defense directors in preparing plans for the safety of the civilian population in the event of nuclear attack. Without AEC information, civil defense planners would have no positive evidence that their programs were being undertaken in the correct manner.

These are just a small number of the many ways in which the AEC and atomic energy affect our daily lives. It is entirely possible that advances made by the AEC could have been made under another system of control. The simple fact is, however, that they were not. In 1946, it was necessary for the government to control and direct the development of atomic energy. By 1963, the AEC proposed to Congress that legislation should be passed to allow private concerns to own nuclear materials. In 1964, Congress agreed with the proposal and passed a law ending mandatory government ownership of fissionable materials.⁵

⁵Ibid., Fifth Annual Report.

Obviously, AEC power was somewhat curtailed by the 1964 law. The Atomic Energy Act of 1946 still remains significant. Most of the advances made in atomic energy were accomplished during the years when the AEC had more control over the program. It was not known in 1946 what dangers would be encountered in further atomic energy research. By giving the AEC primary authority in the conduction of the program, the people of the United States would be assured that atomic energy development would be undertaken in a manner that would not endanger public safety or national security.

When atomic energy was in its infancy, consequences could have been disastrous if it had been mishandled. The Atomic Energy Act of 1946 prevented this from occurring. Therefore, any atomic energy programs we have today, or will have in the future, owe their existence to the Atomic Energy Act. All Americans should have knowledge of the act and of the operations of the AEC.

The reason for such knowledge is that decisions concerning atomic energy, or some unforeseen force, may have to be made in the future. We would do well to heed the words of Henry D. Smyth in 1945.

Here is a new tool for mankind, a tool of unimaginable destructive power. Its development raises many questions that must be answered in the near future. . . . These questions are

not technical questions; they are political and social questions, and the answers given to them may affect all mankind for generations. . . . In a free country such as ours, such questions should be debated by the people and decisions must be made by the people through their representatives.⁶

Unfortunately, most Americans are unaware of what has gone before, or what the situation is at the present. The study of the Atomic Energy Act of 1946 provides the interested person with a basic knowledge of the characteristics of the program. If new decisions are to be made in the future, the people must be prepared to exert influence. In 1946, the public did not have the information to enter into the legislative process. Today it does.

The American people are, indeed, fortunate that the duly elected representatives in 1946 had the perseverance and foresight to construct a law with which the future could be faced with confidence. In studying this law, we must bear in mind that the actions of Congress in 1946 had a direct bearing on the success of the atomic energy program in the United States. In the case of atomic energy, the Atomic Energy Act of 1946 represents an integral part of the inheritance of the Atomic Energy Commission. Without that inheritance, the Commission's activities would have a lesser meaning.

⁶Henry D. Smyth, A General Account of the Development of Methods of Using Atomic Energy for Military Purposes Under the Auspices of the United States Government (Washington: Government Printing Office, 1945), p. 165.

Morgan Thomas, concerning atomic energy, states that "we seem to have found the means not only to control the atom, but to do so in a way that it can serve our own well-being and that of the rest of the world."⁷ The means by which this was achieved were the provisions of the Atomic Energy Act of 1946.

Significance of the Origin of the Atomic Energy Act

Perhaps the most significant aspect of the Atomic Energy Act of 1946 is its origin. To state the exact origin of the act is an impossible task. The efforts of many people from all walks of life were culminated in the passage of the Atomic Energy Act. It is possible, however, to discuss the major impulses behind this tremendously important piece of legislation.

The scientific community was instrumental in the formulation and passage of the act. This fact seems only proper since it was the scientists who had lived with the technical problems and had nurtured atomic energy from its infancy. Men such as Vannevar Bush and James B. Conant took the initiative in securing adequate domestic control of atomic energy even before the bomb had been unleashed on Hiroshima.

⁷Morgan Thomas, Atomic Energy and Congress (Ann Arbor: The University of Michigan Press, 1956), p. 1.

Scientists continued to exert their influence after the war in fighting for passage of legislation. The administrative provisions of the various proposals were not of major concern to the scientists. Their objective was to insure that the research provisions of the act would allow them sufficient freedom of action to pursue their research after its enactment.

Congress was able to perform its task in a much more efficient manner because of the scientists. Through their testimony in hearings and by direct contact with Congressmen, the scientists were able to educate Congress as to the problems that atomic energy entailed. Of particular influence on the final provisions of the act, was a group of scientists in Chicago who were constantly asked for suggestions by James R. Newman and Byron S. Miller.

It was the alarm sounded by the scientists that caused the doom of the War Department bill. If the scientific community had not voiced such strong protest to the restrictions on research contained in the bill, atomic energy may not have advanced as far as it has. Similarly, the scientists exerted positive influence on the McMahon bill. Their support no doubt increased its possibility of passage.

Probably never before in history had the scientific community taken such interest in legislation passed by Congress. The actions of the scientists, beyond their

invaluable technical work, were of incalculable importance.

- The scientists, more than any one group, were most responsible for the research provisions of the bill. Other men and other groups, however, were of great importance, also.

The military played an important role in the legislative process that produced the Atomic Energy Act. Although the War Department bill contained provisions that were of possible danger and it became very unpopular, it was useful. It was useful in the sense that it illustrated the fact that some military representation was necessary in the structure of the AEC.

Military men, especially General Groves, and the War Department were heavily criticized for the provisions of the War Department bill. It is interesting to note, however, that when the McMahon bill came to the floor, it was supported by the War Department, including Secretary Patterson. The military was satisfied with the McMahon bill after the Vandenberg amendment had been added and they did not warrant criticism that they received.

The War Department bill was opposed, as it should have been, but direct criticism at its drafters was made without proper consideration. It took a man of the stature of Karl Compton, who had been on both sides of the issue, to realize that "the bill was prepared and introduced with the wisest of motives and that back of it there is

nothing of the sinister intent which some people, including a good many of our scientists have suspected."⁸

Although the military view and the scientific view contained inherent differences, they made possible the prospect of better legislation. Cooperation and compromise have characterized our nation from its very inception. With certain groups being divided on issues in the proposed bill, it was possible to achieve an act that was satisfactory to both sides and better than either would have done alone.

Obviously, the scientific community and the military provided part of the impulse behind the Atomic Energy Act, but the government and Congress participated in an essential manner, also. President Truman offered direction to Congress and served as the man whose approval had to be won if success was to be achieved. Truman, however, could not have decided on the merits of the proposals without the aid of his advisers.

Various government agencies and officials espoused their views on the administrative aspects of the proposed bills. In so doing, they provided the Congress with the wisdom of their many years in public service. The Bureau of the Budget, for example, was instrumental in having the

⁸Richard G. Hewlett and Oscar E. Anderson, The New World, 1939-1946, Vol. I, A History of the U. S. Atomic Energy Commission (University Park, Pennsylvania: Pennsylvania State University Press, 1962), p. 435.

position of General Manager incorporated in the final AEC structure. In the case of the structure of the AEC, government officials, as well as scientists and military personnel, offered their views. Congress was thus provided with various proposals from which an acceptable structure could be devised.

Finally, the role of Congress, and certain Congressmen in particular, should be heralded. Congress faced an almost insurmountable task in the fall of 1945 in dealing with atomic energy. Members of Congress realized the importance of their decisions and, consequently, they labored with almost infinite energy in striving for their ultimate goal. The product of their labor, the Atomic Energy Act of 1946, however, could have never been formulated in the excellent form that it was without the contributions of countless others.

Some Congressmen deserve special mention for their part in the passage of the act. Senator Brien McMahon, a freshman Senator in 1945, exhibited a vitality and vigor that was matched by no one. McMahon continued where a lesser man would have conceded. Senator Arthur Vandenberg, realizing the need for military representation in the AEC structure, supported his conviction by proposing the amendment to S. 1717 that accomplished a perfect compromise between civilian and military control.

All of the members of the Special Senate Committee on Atomic Energy displayed commendable perseverance in educating themselves, with the aid of James Condon, on the intricacies and problems of atomic energy. They endured months of testimony from various witnesses because they wanted to be certain that all views were heard. Members of the committee, of course, could not have succeeded without the aid of scientists, military leaders, government officials, and two lawyers, James R. Newman and Byron S. Miller. They displayed the teamwork that is necessary for meaningful legislation to be passed.

The preceding accolades for the Senate members are not to suggest that the House was negligent in its duties. House members added such necessary features to the McMahon bill as the requirement that a military officer be the Director of the Division of Military Application. The House was also wise enough to realize that its own bill was inadequate and thus adopt the Senate measure.

Particular members of the House deserve special attention, also. R. Ewing Thomason rendered invaluable service in defending S. 1717, especially the Vandenberg amendment and the Conference Committee report, in the debates on the bill on the House floor. Clare Booth Luce captured the spirit of the occasion by admitting that AEC powers were unprecedented and possibly socialistic, but supporting

the McMahon bill because the situation called for a novel approach.

It is apparent that the impulses behind the Atomic Energy Act of 1946 emanated from many sources too numerous to mention. This fact is what perpetuates our democratic governmental process. Our government possesses the ability to undertake a problem which has no guiding precedent. The opinions of many are heard and a compromise is reached. In the case of the Atomic Energy Act, the scientists were heard, the military leaders were heard, the government was heard, and the people were represented by their Congressmen.

Through our democratic process, a democratic measure was produced in an area that was forced to be undertaken, for national security reasons, in secret. Provisions in the Atomic Energy Act assured scientific participation, military participation, and surveillance over the entire program by the elected representatives of the people, the President and Congress. For a secretive program to be controlled in a democratic manner is, in itself, a tribute to American democracy.

It would have been much easier for the United States to have suppressed the atomic energy program under military control after the war. To have done this would have been contrary to our cherished principles and would have deprived the American people of the tremendous peaceful uses of atomic

energy. We chose to follow our traditional methods, as difficult as they were. The success that was achieved, however, warranted the months of trial and tribulation.

In the 1830's, Alexis De Tocqueville, in observing American Democracy, stated that a democracy,

• • . can only with great difficulty regulate the details of an important undertaking, persevere in a fixed design, and work out its execution in spite of serious obstacles. It cannot combine its measures with secrecy or await their consequences with patience.⁹ .

De Tocqueville, in all his wisdom, could not have possibly foreseen the action of American democracy in 1946. For in that year, the nation and Congress had answered Congressman Jerry Voorhis' appeal "to raise our sights even for a moment . . . above the level of political slogans . . . to a vision of the stars themselves and the universe whence atomic energy has come."¹⁰

⁹Phillips Bradley, editor, Democracy in America (New York: Alfred Knopf Co., 1945), Vol. I, pp. 234-235.

¹⁰Hewlett and Anderson, op. cit., p. 530.

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APPENDIX

- A. Chronology of Significant Events
- B. Governmental Control of Atomic Energy

APPENDIX A: CHRONOLOGY OF SIGNIFICANT EVENTS

- October 11, 1939 Einstein's letter conveyed to FDR
- October 21, 1939 Uranium Committee established by Roosevelt
- June 27, 1940 NDRC established
- June 28, 1941 OSRD established with Dr. Bush as director
- November 28, 1941 Uranium program transferred from NDRC to OSRD
- August 17, 1942 MED established
- September 23, 1942 Military Policy Committee named
- July 16, 1945 First atomic bomb exploded
- May 31, 1945 Interim Committee appointed
- October 3, 1945 President Truman sent message to Congress to initiate legislation
- October 3, 1945 War Department bill introduced in House
- December 20, 1945 McMahon bill introduced in Senate
- February 1, 1946 Truman expressed support of S. 1717
- June 1, 1946 S. 1717 passed by the Senate
- July 18, 1946 McMahon bill passed by the House

July 26, 1946 Atomic Energy Act
of 1946 passed by
Congress

August 1, 1946 Truman signed act
into law

January 1, 1947 AEC assumed control
of atomic energy
program

APPENDIX B: GOVERNMENTAL CONTROL OF ATOMIC ENERGY

PRESIDENT

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NATIONAL SECURITY COUNCIL

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BUREAU OF THE BUDGET

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MILITARY ESTABLISHMENT * * * * * ATOMIC*ENERGY COMMISSION * * * * * CONGRESS

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JOINT COMMITTEE
ON
ATOMIC ENERGYMILITARY
LIASON
COMMITTEE

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GENERAL ADVISORY COMMITTEE

