THE DIPLOMACY OF THE TEST BAN TREATY
THE U. S. POSITION

by 1264

MARTHA SUE PETERSON

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Approved by:

Bower Sageser
Major Professor

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CHAPTER I

FIRST ATTEMPTS TO CONTROL ATOMIC ENERGY

When Professor J. Robert Oppenheimer of the University of California and his associates gathered at Los Alamos, New Mexico, in March of 1943, few knew that their job was to design, assemble, and test an atomic bomb. The destructive power of this bomb was not general knowledge until the United States became the first nation to use it against Japan by dropping one on Hiroshima, an important Japanese base on Honshu Island, on August 6, 1945. This bomb, developed at Los Alamos, was more than 12,000 times as powerful as the best improvement on TNT. One hundred and twenty-three of these bombs would have contained as much destructive power as all of the 2,435,595 tons of bombs dropped by the Allies on Europe during World War II.[1] Whether or not this destruction was necessary to bring the Japanese to an early surrender has been debated many times, but the horror of this weapon was obvious to anyone who knew anything about Hiroshima.

The reactions of other nations, after Hiroshima, ranged from Winston Churchill's hope, "that these awful agencies will be made to conduce to peace among the nations, and that instead of wrecking measureless havoc upon the entire globe they may become a perennial fountain of world

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[1] "Atomic Age," Time, vol. 46, Aug. 20, 1945, p. 32.

prosperity,"[2] to the Swedish harsh criticism of the act. The Swedes did not accept the American justification of the act as the British had. The United States reasoned that the bomb would shorten the war and thereby save the lives of untold thousands of American and Allied soldiers, who otherwise would have been killed in battle.[3] On August 9, the liberal evening newspaper of Stockholm, the Aftonbladet, stated in a leading article, "It is all very well if atom raids can shorten the war, but this experiment with the population of an entire city as a guinea-pig reflects no martial glory on its authors. The professors who thought out the whole theory can hardly feel any joy over the first application of their discovery."[4]

After the destructive powers of the bomb had been realized, many wondered if the scientists who helped in developing it felt a sense of guilt. Dr. Harold C. Urey, a Nobel Prize Winner whose research helped pioneer the atomic age, spoke for many scientists when he answered this question of guilt by saying, "Atomic energy is in nature. It can't be concealed. Scientists can't prevent modern war by refusing to do scientific work. The solution is political."[5]

Nevertheless, it had to be recognized that as people became better

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[2]The Times (London), August 20, 1945, p. 29.

[3]U.S., Congress, House of Representatives, Committee on Military Affairs, Hearings, An Act for the Development and Control of Atomic Energy, 79th Congress, 1st Session, 1945, p. 1.

[4]The Times (London), August 10, 1945, p. 4.

[5]"Interview with Professor Harold C. Urey," New Yorker, vol. 21, Dec. 15, 1945, p. 24.

informed about the potential of atomic weapons, there was the possibility of a reaction against science. As J. Robert Oppenheimer stated:

> Whatever the individual motivation and belief of the scientist, without the recognition from his fellowmen of the value of his work, in the long term science will perish. I do not believe that it will be possible to transcend the present crisis, in a world in which the works of science are being used, and are being knowingly used, for ends men hold evil; in such a world it will be of little help to try to protect the scientist from restraints from controls, from an imposed secrecy, which he rightly finds incompatable with all he has learned to believe and cherish.[6]

The only redemption from this dilemma, Oppenheimer believed, was for scientists to recognize the threat of this new power and then to do all in their power to help remove the factor that made nuclear power a threat. This factor was war. Oppenheimer thought that it was necessary to strengthen ties among scientists of different nations which would help establish confidence among nations. Without this confidence, an armaments race was sure to develop. People would again reason, "that somehow these separate distrustful atomic arsenals would make for the peace of the world." Oppenheimer continued, "It would seem to me visonary in the extreme, and not practical, to hope that methods which have so sadly failed

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[6] J. Robert Oppenheimer, "Atomic Weapons and the Crisis in Science," The Saturday Review of Literature, vol. 28, Nov. 17, 1945, p. 11.

to avert war in the past will succeed in the face of this far greater peril."[7]

Since the United States was the only nation, at this time, which possessed the atomic bomb, she had the responsibility of formulating a plan for controlling this weapon. The first concern was controlling atomic power on the national level. In some ways, the act that established the Atomic Energy Commission to oversee all developments in the field of atomic energy seemed a realization of the fears of control expressed by scientists after Heroshima. Yet in a statement by Oppenheimer, Enrico Fermi, and Ernest O. Lawrence, these scientists agreed that, "With wisdom operations can be carried on within the framework of the proposed legislation safely, effectively, and in the best interests of this Nation. We believe that the broad powers granted the Commission by the legislature are justified by the importance and perils of the subject."[8]

After the establishing of the Atomic Energy Commission, the United States turned to the problem of how to handle the question of atomic power in international diplomacy. The United States could conceivably have decided that atomic weapons should be declared illegal as gas warfare was after World War I, but this would have been admitting that the United States had committed a crime in using the bomb against Japan. Besides, almost everyone agreed that the United States had plenty of time to exploit its atomic

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[7] Ibid., p. 11.

[8] Hearings, An Act for the Development and Control of Atomic Energy, p. 107.

monopoly. Even Major General Leslie R. Groves, Director of the Manhattan Project, believed that it would take other nations, including Russia, many years to develop an atomic bomb of their own. Then there would be the problem of catching up with the production in the United States.[9]

On June 14, 1946, Bernard Baruch, the United States Representative to the United Nations, presented a plan for controlling the development of atomic energy to the United Nations Atomic Energy Commission. This proposal, which came to be known as the Baruch Plan, proposed the following:

> "The United States proposes the creation of an International Development Authority, to which should be entrusted all phases of the development and use of atomic energy, starting with the raw material and including -
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> 1. Managerial control or ownership of all atomic-energy activities potentially dangerous to world security.
> 2. Power to control, inspect, and license all other atomic activities.
> 3. The duty of fostering the beneficial uses of atomic energy.
> 4. Research and development responsibilities of an affirmative character intended to put the Authority in the forefront of atomic knowledge and thus to enable it to comprehend, and thereafter to detect, misuse of atomic energy."[10]

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[9]William B. Bader, The United States and the Spread of Nuclear Weapons, New York, 1968, p. 20

[10]"The Baruch Plan. Statement by the United States Representative (Baruch) to the United Nations Atomic Energy Commission, June 14, 1946," Documents on Disarmament, 1945-59, vol. I, pp. 10-11.

Also under this plan, as soon as a system of adequate control was established, the bomb would be renounced as a weapon for war. The United States would destroy all her atomic weapons, and no more atomic bombs would be manufactured.[11]

The Baruch Plan died almost as soon as Baruch finished his speech. The Soviet Union refused to even consider the plan. No doubt the United States believed that she was being generous in giving up control of the study of atomic energy to an international committee, but the Soviet Union did not see this as a generous move. The Russians saw in this plan a continuation of American domination in the area of atomic energy. Since the United States would not stop testing bombs until an adequate system of control was established, she could conceivably continue testing for several years. Also, when the commission was established, it would in all probability be dominated by the United States; because she would be the most advanced nation in the field of atomic power, if not still the only nation to have developed the atomic bomb.

Following the United States presentation of the Baruch Plan was the Soviet Union's own plan on controlling atomic power. This was given by the Soviet Representative to the United Nations Atomic Energy Commission, Andrei Gromyko. Included in this proposal was a plan to "prohibit the production and Employment of Weapons Based on the Use of Atomic Energy

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[11] Ibid., p. 11.

for the purposes of mass destruction."[12] Also, a committee would be formed for the purpose of exchanging new knowledge concerning atomic energy. Unfortunately, there was no provision for any type of inspection. The Russian proposal was basically prohibition without enforcement. Here in the first plans of the Soviet Union and the United States the problem of inspection arose. This problem plagued all future negotiations between the United States and the Soviet Union. The soviets continually insisted that a disarmament program be based on trust, not inspection; and the United States believed she had no reason to trust the Soviet Union, considering her past record of broken treaties.

In 1949, when the Soviet Union exploded her first atomic bomb, the United States lost her monopoly over atomic weapons. Now the problem was one of mutual disarmament. Also, the United States realized that progressively more nations would develop the atomic bomb.

Soon after the Soviet Union developed her atomic bomb, an event occurred which slowed down disarmament negotiations. On June 25, 1950, North Korean forces marched into South Korea, and the United States became involved in the conflict immediately. During the Korean War, which lasted from June of 1950 to July of 1953, the problem of settling this conflict gained priority over any other considerations. The concern of the United States was again that of increasing armaments, rather than disarmament. As

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[12]"Address by the Soviet Representative (Gromyko) to the United Nations Atomic Energy Commission, June 19, 1946," Documents on Disarmament, 1945-59, vol. I, p. 11.

President Harry Truman stated in a radio address on November 7, 1951, "The aggression in Korea has shown that Communist imperialism will resort to open warfare to gain its ends. In these circumstances we must have strong military defenses, and we are building them."[13]

No doubt the Korean War did make the possibility of a nuclear war seem more real, but it was not realistic to believe that the United States would be talking disarmament in the middle of a war. Disarmament was thought of as a goal for the future, and not something that could be dealt with at that time.

During the Korean War, more powerful weapons were developed such as the hydrogen bomb; but little was achieved in the area of disarmament. At the close of the Truman administration, no real gains had been made towards controlling the development of atomic weapons.

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[13]"Radio Address by President Truman, November 7, 1951," Documents on Disarmament, 1945-59, vol. I, p. 276.

CHAPTER II

EISENHOWER'S SEARCH FOR A DISARMAMENT PROGRAM

When Dwight D. Eisenhower was inaugurated president in January of 1953, the Korean Conflict had not been settled. The armed truce which ended the fighting did not come until July 27, 1953. Up to this time, the arms race had continued. Because of this, President Eisenhower did not forget the problem of disarmament. At the beginning of his administration, he stated his goals on disarmament. They were:

"1. The limitation, by absolute numbers or by an agreed international ratio, or the size of the military and security forces of all nations.

2. A commitment by all nations to set an agreed limit upon that proportion of total production of certain strategic materials to be devoted to military purposes.

3. International control of atomic energy to promote its use for peaceful purposes only and to insure the prohibition of atomic weapons.

4. A limitation or prohibition of other categories of weapons of great destructiveness.

5. The enforcement of all these agreed limitations and prohibitions by adequate safeguards, including a practical system of inspection under the U.N."[1]

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[1]Dwight D. Eisenhower, "The Chance for Peace," Public Papers of the Presidents, vol. I, 1952 (Washington, 1960), pp. 185-86.

One of President Eisenhower's public proposals dealing with disarmament was his "Atoms for Peace" address to the United Nations on December 8, 1953. In this speech, he proposed the investigation of the peaceful uses of atomic energy and the gradual dismantling of atomic weapons. Unfortunately, the prospects were still quite dim for any type of disarmament proposal being accepted by both the United States and the Soviet Union. As Secretary of State John Foster Dulles said in January of 1954, there was little prospect that the Soviet Union would make a proposal for the abolition of atomic weapons that would be acceptable to the United States.[2] Even though the United States was for a disarmament program, the emphasis was usually on a program for arms control and reduction rather than total abolition of nuclear weapons. This was the period of John Foster Dulles and the hard line approach to Communism -- the belief that the United States could not let down its guard against the enemy for one moment. As was stated in the New York Times, "The idea behind U.S. policy is that if atomic weapons were eliminated the advantages would shift to the Soviet Union's manpower."[3]

Yet, later in 1954, two incidents occurred that caused a renewal of interest in formulating some type of disarmament proposal. The emphasis this time was on developing a program which would ban the testing of atomic weapons, even if actual disarmament did not take place. In 1954, the Soviet

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[2]Dana Adams Schmidt, "Molotov's Pleased by Atom Talk Bid," New York Times, Jan. 2, 1954, p. 4.

[3]New York Times, Jan. 24, p. 26.

Union was carrying on a series of atmospheric tests of atomic weapons; and at the same time, the United States began a series of tests of the Hydrogen bomb at Bikini Atoll in the South Pacific. Nuclear fallout from two of these explosions reminded the world of the destructiveness of radioactive fallout miles away from where an atomic bomb was dropped. The first incidence of fallout in Japan in 1945 occurred during the time of war so destruction was expected, but the happenings of 1954 showed the world that people could be injured by weapons tests where all possible precautions had been taken to protect them from the effects of fallout. A Japanese fishing vessel, the Fukuryu Maru (Lucky Dragon), ventured too near the testing area, in spite of the fact that the United States had warned people to stay away from this area.[4] As the result of this, twenty-three fishermen were injured, one fatally, by the fallout.[5] Not long after this, a test by the Soviet Union resulted in a rain of radioactive fallout upon Japan.[6] After these two incidents, there was a renewal of interest in controlling nuclear testing. The next few years were filled with proposals from several countries on banning nuclear tests.

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[4]United States Disarmament Administration, Geneva Conference on the Discontinuance of Nuclear Weapon Tests, History and Analysis of Negotiations, Dept. of State Publication 7258, Disarmament Series 4, Released Oct. 1961, p. 3.

[5]Dwight D. Eisenhower, "Joint Statement Following Discussions with Prime Minister Yoshida of Japan." Public Papers of the Presidents, vol. II, U.S. Govt. Printing Office, 1960, p. 1043.

[6]Dept. of State Publication 7258, p. 3.

The first country that responded with a request for a test ban, as the result of the above incidents, was India.

Addressing the Indian Parliament, Prime Minister Jawaharlal Nehru expressed hopes that, "some sort of what may be called 'standstill agreement' in respect, at least of these actual explosions, even if arrangements about the discontinuance of production and stockpiling must await more substantial agreements among those principally concerned."[7]

Other statements were also made by Professor Albert Einstein, Professor Dwight Martin, Defense and Scientific Adviser to the Government of Australia, Lester Pearson, Canadian Minister for External Affairs, and Georgi M. Malenkov, Soviet Prime Minister.[8]

As Prime Minister Nehru said, "There can be little doubt about the deep and widespread concern in the world particularly among peoples, of other nations, about these weapons and their dreadful consequences."[9]

At this time, the principle disarmament forum was the Disarmament Subcommittee of the United Nations. The members of this group were the United States, the Soviet Union, the United Kingdom, France, and Canada. Of these, only the first three actually had nuclear weapons and were testing them. At this time, none of the countries were willing to suspend tests

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[7]"Statement by the Indian Prime Minister (Nehru) to Parliament Regarding Nuclear Tests [Extracts], April 2, 1954," Documents on Disarmament, p. 410.

[8]Ibid., p. 409.

[9]Ibid., p. 409.

unless a way could be found to control or limit the production of nuclear weapons. This continued to be the position of President Eisenhower into 1955. As he stated in a press conference of February 1955, in response to a question on the desirability of a test ban, such a ban would have to come in the context of a "decent and proper disarmament proposal."[10] By this statement, Eisenhower meant that a proposal must include more than a test ban.

The next major proposal by the United States was presented at the summit conference in Geneva during July of 1955 by President Eisenhower. The leaders of the other delegations attending were the following: Prime Minister Anthony Eden of the United Kingdom; Premier Edgar Faure of France; and the Soviet Union's chairman of the Council of Ministers, N. A. Bulganin.[11] This Eisenhower proposal dealt with methods of inspecting other nations for possible violations of a treaty. According to this plan, airplanes would be flown over the participating countries and would be authorized to stop and investigate various areas, which had been decided upon previously by the staff administering the program. This came to be known as the "Open Skies" plan.[12] Such close inspection of her territory was rejected by the Soviet Union.

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[10]Eisenhower, Public Papers of the Presidents, vol. III, 1955 (Washington, 1959), p. 287.

[11]Dwight D. Eisenhower, Mandate for Change, 1953-1956, (Doubleday and Company, New York, 1963), p. 511.

[12]Ibid., pp. 520-21.

During 1955, the first Soviet proposal was made concerning the banning of nuclear weapons, which did not advocate comprehensive nuclear disarmament. This proposal encouraged countries possessing nuclear weapons to continue trying to reach an agreement that would bring complete disarmament; in the meantime, the testing could be stopped. The programs of the United States still had not separated the problem of a test ban from the program for more comprehensive disarmament. As Secretary of State Dulles stated at the Geneva Meeting of Foreign Ministers on November 11, 1955, "if agreement can be reached to eliminate or limit nuclear weapons under proper safeguards, the United States would be prepared to agree to corresponding restrictions on the testing of such weapons."[13] All of the proposals made were rejected. The Soviet Union would not accept a treaty with inspections, and the United States would not accept one without. Here again, the fundamental difference between the disarmament proposals of the Soviet Union and those of the United States was shown. The Soviet Union insisted that all plans for disarmament be based on simple voluntary agreements. They wanted no safeguards, no control, and no inspections. This had prevented the signing of any agreement. As President Eisenhower said in a speech during October of 1956, "There is only one reason why no safe agreement has been effected to date: the refusal of the Soviet Union to accept any dependable system of mutual safeguards."[14] A test ban as such

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[13]Dept. of State Publication 7258, p. 5.

[14]Eisenhower, Papers of the Presidents, vol. IV, 1956 (Washington, 1958) p. 999.

was still being shied away from, because the United States was, even at this late date, not sure of the ability to detect all tests; and the position of the State Department was that a test ban was meaningless unless accompanied by disarmament plans.

As the result of concern over this problem of atomic weapons tests, on November 1, 1955, the United States and the United Kingdom introduced a resolution to the First Committee of the General Assembly of the United Nations, which called for a scientific committee to study the effects of atomic radiations.[15] While scientists studied the long-term effects of radioactive contamination on the bones, the blood, and the genetic structure of man, anxiety over the continuation of nuclear testing grew all over the world.

These studies prompted a proposal by India in 1956 for the prohibition of tests, which stressed the risks to human health that were brought about by the testing of nuclear weapons. This same year, the Soviet Union renewed her campaign for a cessation of tests, arguing that no supervision would be needed for a banning of tests because technological discoveries had made it possible to detect any explosion of an atomic bomb no matter where it might be set off. What the Soviets wanted to do was to separate the issue of the suspension of tests from other issues of disarmament and work for this as a first step towards the prohibition of nuclear weapons.[16]

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[15]Dept. of State Publication 7258, p. 4.

[16]Ibid., pp. 5-6.

President Eisenhower gave his answer to both of these proposals on October 23, 1956. At this time, he reinforced the position that the United States would not enter into any treaty banning nuclear tests unless the Soviet Union would agree to include other measures of disarmament as well as safeguards such as inspection, which could assure the United States and other parties to the treaty that all signers were carrying out the agreement. President Eisenhower did not believe that an agreement to stop tests, even those of hydrogen bombs only, could be self-inforcing; and he denied that testing imperiled the health of humanity. On the other hand, he thought that continued testing would help the United States to develop better defensive weapons and weapons with less fallout.[17]

In 1957, more proposals were made by the United States and the Soviet Union. Again the proposals failed to result in an agreement. The Soviets continued to refuse to accept a program with inspection; and the United States still insisted on it, before she would agree to any form of a test ban. However, since the Soviets continued to be so firm on their stand that inspection was not needed because tests could be detected without any inspection, in 1958 President Eisenhower decided that technical studies of the problem would help to bring political agreement. Though Premier Khrushchev felt such a study would merely delay negotiations on a treaty, he agreed on May 30, 1958 to a meeting at Geneva.

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[17] Ibid., p. 7.

This meeting at Geneva was composed of a Conference of Experts from the United States, the United Kingdom, France, Canada, the Soviet Union, Poland, Czechoslovakia, and Rumania. The Committee studied the "methods for detecting possible violations of an agreement on the cessation of nuclear tests."[18]

The Geneva Conference of Experts held 30 formal and several informal sessions from July 1 to August 21, 1958. From their study, they reached the conclusion that it would be possible to detect and identify most nuclear explosions. All of the methods of detecting nuclear explosions were discussed. These methods were "the collection of samples of radioactive debris, the recording of seismic, acoustic and hydro-acoustic waves, and the radio signal method, together with the use of on-site inspection of unidentified events which might be suspected of being nuclear explosions."[19] Large explosions were, of course, more easily identified than small explosions, because of the latter's similarity to signals produced by such natural phenomena as earthquakes and thunder storms. The Conference recommended that any countries agreeing on a test ban should establish a network of control posts which would be equiped with all of the apparatus necessary for the various methods of detecting nuclear explosions. These posts would be on islands, continents, and a few ships in the oceans. Also, the control

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[18] Ibid., pp. 14-15. (The list of the men attending these meetings is found in Appendix A).

[19] "Communique and Report of the Conference of Experts to Study the Possibility of Detecting Violations of Possible Agreement on the Suspension of Nuclear Tests, August 21, 1958," Documents on Disarmament, 1945-59, vol. II, p. 1090.

system for these posts would be under the direction of an international control organ.[20]

Immediately after the release of the conclusions of the Conference of Experts, President Eisenhower made a statement in which he said the United States was now willing to negotiate on a treaty for banning nuclear tests. This was the first time that the United States had been willing to separate the problem of a test ban from a program for more inclusive disarmament. The plan for suspending testing was expected to include an international control system as was suggested by the Geneva Conference of Experts. According to the President, the United States would be ready to begin these negotiations on October 31, 1958. Also, in order to create a better atmosphere for the negotiations, President Eisenhower stated that the United States would be willing to suspend the testing of nuclear weapons for a period of one year from the beginning of the negotiations. This was not considered to be a substitution for further work on disarmament. As President Eisenhower stated: "An agreement in this respect is significant if it leads to other and more substantial agreements relating to limitation and reduction of fissionable material for weapons and to other essential phases of disarmament. It is in this hope that the United States makes this proposal."[21]

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[20] Ibid., p. 1091.

[21] "Statement by President Eisenhower: Experts' Report on Detection of Nuclear Tests, August 22, 1958," Department of State Bulletin, Sept. 8, 1958, pp. 378-379.

Other nations that agreed to begin negotiations on October 31, 1958 were the United Kingdom and the Soviet Union. The Soviet Union had been pressing for an end to all testing since April of 1958. Yet at the beginning of November, after negotiations had begun in Geneva, the Soviet Union exploded nuclear devices. President Eisenhower commented on this by saying that this obviously released the United States from any obligations to refrain from testing. However, neither the United States nor the United Kingdom would resume testing, and both hoped that the Soviet Union would stop testing.[22] After these tests, no more atmospheric tests by the Soviet Union were discovered until after August 30, 1961, when she announced a resumption of testing. It was possible, though, that secret underground tests were carried on by the Soviet Union during this time, since this type was much more difficult to detect.[23]

When the negotiations began in Geneva, the United States delegation was led by James J. Wadsworth, who was the United States Representative on Disarmament and Deputy Representative to the United Nations. His deputies were Charles C. Stelle and David H. Popper, and they spoke for the United States in his absence. The British delegation was headed by David Ormsby-Gore, Minister of State for Foreign Affairs, with Sir Michael Wright as Deputy British Representative. Semyon K. Tsarapkin represented the Soviet Union. All of the heads of the delegations had held the personal rank

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[22]"Statement by President Eisenhower Regarding Recent Soviet Nuclear Tests, November 7, 1958," Documents on Disarmament, 1945-59, vol. II, p. 1221.

[23]Dept. of State Publication 7258, p. 21.

of Ambassador.[24]

In January of 1959 with the Geneva Conference in session new information was discovered which forced the United States to re-evaluate the data produced by the Geneva Conference of Experts. The Geneva Conference of Experts had stated that even though they might not be able to identify whether an underground explosion was caused by a nuclear device of natural phenomena by seismic means alone, "It would be possible to identify a large fraction of seismic events as natural earthquakes when the direction of first motion of the seismic signal was observed at several appropriately located stations."[25] However, the President's Science Advisory Committee had studied this method further during the Hardtack tests in the fall of 1958. From this study, they reached the conclusion that this method of distinguishing earthquakes from explosions was not nearly as effective as it had been estimated to be by the Geneva Conference of Experts. Also, it was discovered that there were about twice as many earthquakes which were equal to an underground explosion of a given yield as had been estimated. This, of course, greatly reduced the number of earthquakes that could not be distinguished from underground nuclear explosions. The methods of detection the United States had at that time were not as accurate as the Conference of Experts had believed they were. More research was necessary to reduce

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[24] Ibid., p. 22.

[25] "Panel on Seismic Improvement Reports Findings on Underground Explosions," U.S. Dept. of State Bulletin, vol. 41, July 1959, p. 17.

the number of unidentified tests to the Conference's rate.[26]

No doubt this report influenced the type of proposal the United States presented to the Geneva Conference. The first American proposal was for a limited test ban. This was in a letter of April 13, 1959. Previous proposals by both the Soviet Union and by the United States had called for a total cessation of testing. In this letter, President Eisenhower suggested prohibiting atmospheric tests as a first step towards a total banning of tests. He believed this would be easier to negotiate; because, as he said, "A simplified control system for atmospheric tests up to 50 kilometers could be readily derived from the Geneva Experts' Report, and would not require the automatic on-site inspection which has created the major stumbling block on the negotiations so far."[27]

Unfortunately, the Soviet Union would not at this time agree to that type of a proposal. Premier Khrushchev's reason for rejecting this proposal was that it would not attain the basic goal of "preventing the production of new and even more destructive types of nuclear weapons."[28] He felt that such a treaty could not possibly reach the goal of preventing the pollution of the atmosphere, the soil and the water by radioactive products

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[26] Ibid., p. 18. (A chart which compares the studies of the Geneva Conference of Experts and the President's Science Advisory Committee can be found in Appendix B).

[27] Dept. of State Publication 7258, p. 355.

[28] "Letter from the Soviet Premier (Khrushchev) to President Eisenhower, April 23, 1959," Documents on Disarmament, 1945-59, vol. II, p. 1396.

since it would allow tests at altitudes exceeding 50 kilometers and underground testing.[29]

While negotiations continued in Geneva, the United States Senate was also discussing the benefits of ending nuclear tests. During April of 1959, President Eisenhower was given bipartisan endorsement of his pursuit of a test ban. This came in the form of a Senate Resolution, which was introduced by Senator Hubert Humphrey of Minnesota. The resolution read as follows:

> "Resolved, That the Members of the Senate support the efforts of the United States to continue to negotiate for an international agreement for the suspension of nuclear weapons tests; and be it further
>
> Resolved, That it emphatically endorse the principle that an adequate inspection and control system must be part of any such international agreement involving a suspension of nuclear weapons tests:"[30]

Besides being supported by the Senate, this resolution was also endorsed by the Department of State and the United States Atomic Energy Commission.[31]

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[29] Ibid., p. 1397.

[30] U.S., Congressional Record, 86th Congress, 1st Session, 1959, vol. 105 part 6, p. 7194.

[31] Ibid., p. 7258.

As the Geneva Conference on the Discontinuance of Nuclear Weapon Tests continued, another conference, also in Geneva, was established under the guidance of the United Nations. This was the Ten Nation Committee on Disarmament. Included in this committee were representatives from the following countries: the United Kingdom, United States, France, Italy, Canada, the Soviet Union, Bulgaria, Czechoslovakia, Poland, and Rumania.[32] These ten nations began disarmament discussions at Geneva on March 15, 1960. This Committee was to discuss all facets of disarmament along with the problem of nuclear weapons tests. Unfortunately, this was a short and unsuccessful conference. On June 27, 1960, the United States submitted a program for general and complete disarmament under effective international control to the Ten Nation Committee. The passing of such a program would have resulted in there being "no manufacture of any armaments except for agreed types and quantities for use by the international peace force and agreed remaining national contingents."[33] Immediately after this plan was presented, the Soviet Union walked out of the conference. The Soviet Union delegates remained in the Geneva Conference on Weapons Tests, but their walking out of the conference did not help the atmosphere in the Weapons Tests conference.

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[32]"A Summary of Developments at the Conference of the 18-Nation Committee on Disarmament, Geneva March 14 - June 15," U.S. Dept. of State Bulletin, vol. XLVII, July 23, 1962, p. 155.

[33]"United States Paper Submitted to the Ten Nation Committee on Disarmament: Program for General and Complete Disarmament Under Effective International Control, June 27," Documents on Disarmament, 1960, p. 131.

The negotiations at the Geneva Conference on the Discontinuance of Nuclear Weapons Tests continued until September 9, 1961 into the administration of John F. Kennedy, when the delegates decided to recess until the General Assembly of the United Nations had completed debate on the nuclear tests question.

At this time, no progress had been made towards banning nuclear tests. The end of the moratorium had been announced on December 29, 1959, when President Eisenhower had said that the United States considered itself free to resume testing; because the original agreement had been that they would stop testing for one year after negotiations began. This would be renewed only if progress was made towards establishing a test ban agreement. The actual ending did not come, though, until September 1, 1961. On this date, the Soviet Union began an intensive series of atmospheric testing. The United States began testing two weeks later.[34] The situation looked less promising than it had at the beginning of the Geneva Conference in 1959.

The eight years of the Eisenhower administration did not bring any type of a disarmament agreement. The greatest progress came in the form of a shifting of emphasis. Instead of continuing to work for a program

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[34]"Report by the Senate Foreign Relations Committee on the Test-Ban Treaty, September 3, 1963," Documents on Disarmament, 1963-64, vol. 1. p. 451.

of comprehensive disarmament, the United States had begun to negotiate for a nuclear test ban treaty. Even if the United States was not able to accomplish this at this time, she was beginning to realize that disarmament had to be achieved a step at a time. President Eisenhower had aided the cause of disarmament when he presented his plan for a nuclear test ban treaty, though he had not been successful in negotiating such a treaty.

CHAPTER III

KENNEDY AND THE FIRST SUCCESSFUL TEST BAN TREATY

Before the Geneva Conference had recessed, the United States changed presidents. The new president, John F. Kennedy, had established himself as a supporter of a test ban, while he was still a senator. In a speech at Los Angeles, during 1959, he had outlined his four point nuclear policy:

1. The United States should suspend all nuclear tests as long as the Soviet Union does not resume tests and negotiations for a permanent ban are proceeding amicably.
2. The United States must intensify efforts to have nuclear tests banned under a system of international control and inspection.
3. If negotiations collapse, the U.S. should confine its atomic testing to underground and outer space explosions.
4. National and international studies of the effects of radioactive fall-out must be stepped up.[1]

Kennedy continued to work for a nuclear test ban after he was elected president. As the Soviet Union was beginning her series of tests that ended the moratorium, President Kennedy and British Prime Minister

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[1] Bill Beckers, "Kennedy Favors Atomic Test Ban," New York Times, Nov. 3, 1959, p. 3.

Harold Macmillan were calling for an agreement not to conduct nuclear tests which take place in the atmosphere and produce radioactive fallout.[2]

Unfortunately, since the beginning of 1959, the Soviet Union had changed her stand on negotiating a test ban treaty. Now it was the Soviet Union that objected to solving the problem of weapons tests and disarmament separately. Ambassador Semen Tsarapkin stated on August 28, 1961, in regards to a test ban, "Without disarmament, under the conditions of a mad arms race and the intensive military preparations of the Western Powers it would be a control system only in name and would in effect be a system of espionage."[3] He admitted that this had not been the stand the Soviet Union had maintained previously but justified this change by saying that in 1959 a discontinuance of testing might have served the beneficial purpose of serving as a first step towards disarmament. Now this was not the case. "Instead of disarmament, the Western Powers are intensifying the mad arms race, increasing their land armed forces, their air forces and their navies."[4] This seemed rather strange rationalizing in view of the face that while he was saying this the Soviet Union was planning an intensive series of atmospheric testing, because it was less than a month after that she broke the moratorium by beginning the series of tests mentioned earlier.

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[2]"Proposal by President Kennedy and Prime Minister Macmillan for a Ban on Atmospheric Tests, September 3, 1961," Documents on Disarmament, 1961, p. 351.

[3]Dept. of State Publication 1258, p. 584.

[4]Ibid., p. 584.

During September, October, and part of November, the Geneva talks were discontinued, while debate was going on in the General Assembly of the United Nations on the problem of nuclear weapons. Out of this debate, came a General Assembly resolution on the need to ban nuclear weapons tests. This resolution urged those countries which had been involved in the negotiations at Geneva to resume negotiations. According to this statement, "the treaty should have as its objective the cessation of all nuclear weapons tests in all environments under inspection and control machinery adequate to ensure compliance with its terms."[5]

With this resolution in mind, the negotiations of the Geneva Conference on the Discontinuance of Nuclear Weapons Tests resumed on November 28, 1961. These negotiations were not under quite as favorable an atmosphere as those of 1959 had been, since there was no moratorium on nuclear weapons tests. Both the Soviet Union and the United States had carried out a series of tests that fall. Nevertheless, negotiations did begin on a nuclear test ban.

At the opening of this series of negotiations, the Soviet Union's representative Tsarapkin was the first to present a proposal for a test ban. In view of the fact that it seemed impossible to agree on a system of international inspection, the Soviet Union proposed a program she believed could be effectively controlled with the use of national systems of detection

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[5]"General Assembly Resolution 1649 (XVI): The Urgent Need for a Treaty to Ban Nuclear Weapons Tests Under Effective International Control, November 8, 1961," Documents on Disarmament, 1961, p. 578.

and identification. This proposal was for a discontinuance of nuclear tests in the atmosphere, outer space, and under water. Underground testing would remain until an effective method of testing was established.[6]

This plan was rejected by the United States. In the speech given by Representative Arthur H. Dean to the Geneva Conference, he reminded the Soviet Union of the offer that the United States and the United Kingdom had made in September of 1961 at the beginning of their series of tests.* This proposal, which was mentioned earlier, was to try to encourage the Soviet Union to call off her testing and was open only until September 9. The Soviet Union proceeded with her tests, and then made this proposal to the Geneva Conference after her tests were completed. In light of this, the United States did not believe it could consider this as a serious proposal. Therefore, Representative Dean concluded that the United States would not accept a treaty that did not include adequate controls. As he stated, "We see no reason now to run the risks of successful cheating by further tests in the atmosphere, by accepting any nuclear test ban without adequate, effective and properly policed international controls, because this would not only deceive the world but would reward the Soviet Union for its past violation of its solemn pledge not to be the first to resume testing."[7]

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[6]"Statement by the Soviet Representative (Tsarapkin) at the Geneva Conference on the Discontinuance of Nuclear Weapon Tests, November 28, 1961," Documents on Disarmament, 1961, p. 675.

[7]"Statement by the United States Representative (Dean) at the Geneva Conference on the Discontinuance of Nuclear Weapon Tests, November 29, 1961," Documents on Disarmament, 1961, p. 688.

*Arthur H. Dean had replaced James Wadsworth when John F. Kennedy became president.

The Geneva negotiations continued in this deadlock into January of 1962. At the end of January, it was decided that this conference would adjourn, and negotiations would be established under the Eighteen-Nation Disarmament Conference which was to meet in Geneva on March 14. The Soviet Union did not want to discontinue these meetings but wanted to wait until the United States would agree to the Soviet proposal of November 28. The United States could not accept this proposal, so the negotiations were discontinued.[8]

The Eighteen-Nation Disarmament Committee had been established in December of 1961. Ever since the Soviet walkout had closed the Ten-Nation Committee, the United Nations had been trying to get the United States and the Soviet Union to agree on the establishment of a new committee. The Eighteen-Nation Committee was the result of this pressure by the United Nations. To the ten nations of the old committee, eight new countries had been added. These countries were Brazil, Burma, Ethiopia, India, Mexico, Nigeria, Sweden, and the United Arab Republic. Selection was made on the basis of their geographical distribution. It was this group of nations that began negotiations in Geneva on March 14, 1962. On March 21, it was decided that a subcommittee would be established to consider the question of a treaty on the discontinuance of nuclear weapon tests. This subcommittee would include representatives from the Soviet Union, the United Kingdom,

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[8]"Statement by the Acting United States Representative (Stelle) to the Geneva Conference on the Discontinuance of Nuclear Weapon Tests, January 29, 1962," Documents on Disarmament, 1962, vol. I, p. 24.

and the United States. They would report their progress to the Conference.[9]

It was to this Eighteen-Nation Committee that the United States and Britain submitted on August 27, 1962, another comprehensive test ban treaty along with a treaty that would prohibit tests in the atmosphere, in outer space, and in the oceans and territorial waters.

At this time, a joint statement was made by President Kennedy and Prime Minister Macmillan concerning the second document, the limited ban:

> Unlike a ban on testing in all environments, including underground, a treaty banning tests in the atmosphere, underwater and in outer space can be effectively verified without onsite inspections. Such a treaty would result in a definite downward turn in the arms race as it is represented by testing to develop weapons technology. It would make it easier to prevent them. It would free mankind from the dangers and fear of radioactive fall-out. Furthermore, agreement on such a treaty might be the first step toward an agreement banning testing in all environments.[10]

This proposal of the United States did not include a moratorium on underground testing as had been suggested in the Soviet proposals. The Soviet

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[9]"Report to the United Nations Disarmament Commission on the 18-Nation Disarmament committee's deliberations from the beginning of the Conference, March 14, 1962 to June 1, 1962," Disarmament Document Series, United States Arms Control and Disarmament Agency, No. 77.

[10]"Joint Statement by President Kennedy and Prime Minister Macmillan, August 27, 1962, Documents on Disarmament, 1962, vol. II, p. 792.

proposals for treaties banning tests in the atmosphere, under water, and outer space had always included an agreement for a moratorium on underground testing. In view of the Soviet Union's being the first to end the previous moratorium, the United States had never been able to accept this type of an agreement.

In the statement by First Deputy Foreign Minister Kuznetsov to the Eighteen-Nation Disarmament Committee, in reply to the above proposal, the Soviet Union continued to refuse to consider any type of an agreement that did not include underground testing. The Soviet Union's reasoning was that the United States was much better prepared to carry on a series of underground testing. Therefore, if she agreed to such a proposal, she would be placed at a disadvantage.[11]

The deadlock remained at Geneva, and the negotiations of the Eighteen-Nation Committee were no more successful than the old Geneva Conference on the Discontinuance of Nuclear Weapons Tests had been. Finally, the United States, United Kingdom, and Soviet Union agreed to begin a series of three-power talks in Moscow in July of 1963. Just after this agreement, President Kennedy gave a speech at American University in Washington D.C. This speech, which has come to be known as the University Speech, was entitled "Toward a Strategy of Peace." Here he

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[11]"Statement by First Deputy Foreign Minister Kuznetsov to the Eighteen-Nation Disarmament Committee: Anglo-American Test-Ban Proposals, August 29, 1962, Documents on Disarmament, 1962, vol. II, pp. 827-828.

said that men should not consider war inevitable but should pursue peace attainable through a gradual evolution in human institutions brought about by a series of effective agreements. Disarmament was one area where agreements could help to insure peace, and a test ban treaty would serve as a first step towards a disarmament program. "The conclusion of such a treaty," he stated, "would check the spiraling arms race in one of its most dangerous areas. It would place the nuclear powers in a position to deal more effectively with one of the greatest hazards which man faces in 1963, the spread of nuclear weapons."[12] President Kennedy believed that such a treaty would help the United States move on, "not towards a strategy of annihilation but towards a strategy of peace."[13]

The talks in Moscow began on July the 15th. W. Averell Harriman, Under Secretary of State for Political Affairs, was the chief negotiator for the United States. Other members of the United States delegation were Carl Kaysen from the White House, Adrian Fisher from the Arms Control and Disarmament Agency, John McNaughton from the Department of Defense, and William Tyler from the Department of State.[14] The chief negotiator for the United Kingdom was Viscount Hailsham, Britain's minister of Science. At the opening of the conference, Premier Khrushchev

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[12]U.S. Congress, Senate, Committee on Foreign Relations, Hearings, Nuclear Test Ban Treaty, 88th Congress, 1st Session, 1963, p. 1004.

[13]Ibid., p. 1005.

[14]Theodore C. Sorensen, Kennedy, (Harper & Row, Publishers, New York, 1965), p. 734.

had control of the Soviet Delegation. The United States, of course, still preferred a comprehensive test ban treaty with proper safeguards to a limited agreement, but was prepared to try for a limited agreement if the other seemed unattainable. These talks were to be conducted in almost complete secrecy. The Soviets requested that there be no briefing of correspondents, as there had been at Geneva, and the United States and United Kingdom agreed somewhat reluctantly.[15]

From these negotiations came the limited test ban treaty which was signed in Moscow on August 5, 1963, by the representatives of the three countries: Dean Rusk signed for the United States, the Earl of Home signed for the United Kingdom, and signing for the Soviet Union was A. Gromyko. It was very similar to the draft of the treaty submitted with President Kennedy's and Secretary Rusk's approval in Geneva on August 27, 1962, which also banned nuclear testing in outer space, in the atmosphere, and underwater.[16]

Just prior to the signing of the treaty, on July 26, President Kennedy made a radio-television address concerning the treaty, its limitations as well as its advantages. The treaty was limited in that it only prohibited tests in the air or underwater which could be policed without control posts, on-site inspections, or an international organization. Also, the treaty

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[15]Henry Tanner, "U.S. Seeks Comprehensive Treaty, but Would Accept a Limited Agreement," New York Times, July 15, 1963, p. 1.

[16]U.S. Congress, Senate, Committee on Foreign Relations, Hearings, Nuclear Test Ban Treaty, 88th Congress, 1st Session, 1963, p. 814.

would not mean an end to nuclear war, since it did not restrict a country from using nuclear weapons during time of war. On the other hand, it would radically reduce the nuclear testing which would otherwise be conducted by both sides. After considering the pros and cons of the treaty, the President stated that this treaty was safer for the United States than the continuation of the unlimited arms race. In urging the nation to approve the treaty, President Kennedy made the following statement:

> "If we are to open new doorways to peace, if we are to seize this rare opportunity for progress, if we are to be as bold and farsighted in our control of weapons as we have been in their invention, then let us now show all the world on this side of the wall and the other that a strong America stands for peace."[17]

The treaty itself consisted of a preamble and five articles. At the time it was submitted to the Senate, President Kennedy assured the Senators that the treaty was the whole agreement and was not conditional upon any other understanding.[18]

The preamble to the treaty gave the objective of the treaty as being the first step in achieving complete nuclear disarmament.

Article I defined the type of testing that was banned by the treaty.

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[17]"Radio-Television Address by President Kennedy, July 26, 1963," Documents on Disarmament, 1963, p. 257.

[18]"Report by the Senate Foreign Relations Committee on the Test-Ban Treaty, September 3, 1963," Documents on Disarmament, 1963-64, vol. I, p. 454.

which was, as has been mentioned previously, in the atmosphere; outer space; underwater, including territorial water and the high seas; and any other environment which would cause radioactive debris outside the territorial limits of one of the countries signing the treaty. In accordance with the introduction, the signing parties were to refrain from encouraging or in any way aiding testing in any of the areas mentioned above. This did not prevent any of the countries from using nuclear weapons in time of war.[19]

Article II dealt with the methods of amending the treaty. First, any signer of the treaty could request an amendment. This amendment is then sent to one of the depositor governments; the United Kingdom, Soviet Union, and the United States. These countries in turn send it to the other parties to the treaty. If two-thirds desire a conference, one may be called; but this is not necessary to amend the treaty. For an amendment to be accepted, a majority of the votes of all the parties to the treaty, including the original parties, must agree to it. In order for a country to ratify an amendment, there must be a "deposit of instruments of ratification by a majority of all the Parties, including the instruments of ratification of all of the Original Parties."[20] This means that the United States Senate would have to approve any amendment before it could go into effect.

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[19]"Text of the Treaty," Department of State Bulletin, August 12, 1963, p. 239.

[20]Ibid., p. 240.

Article III gave the conditions for ratification of the treaty. In order for the treaty to go into effect, it had to be ratified by each of the Depositary Governments. After that any government that desired could sign the treaty.

Article IV explained that the treaty would be of unlimited duration, but any party could withdraw from the Treaty, "If it decides that extraordinary events, related to the subject matter of the Treaty, have jeopardized the supreme interests of its country."[21] However, announcement to withdraw must be made three months prior to the act of withdrawal.

Article V designated where texts of the treaty would be deposited and listed signers of the treaty.[22]

Over the previous few years, public pressure had been building for some type of a test ban that could keep nuclear fallout out of the atmosphere. In April of 1962, an editorial in The Nation cited the fact that the Strontium-90 (a radioactive residue of fallout) content in St. Louis milk would soon reach twice the level of the spring of 1959, before the three year moratorium began. This same editorial also lamented the fact, "the superpowers find it difficult to cooperate in anything constructive or spiritually elevating, but when it comes to poisoning the atmosphere they give each other unstinting support."[23] During September of 1962, the United Nations Scientific Committee

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[21] Ibid., p. 240.

[22] Ibid., p. 240. (The text of the treaty is included in Appendix C).

[23] "Happy Easter," Editorial, The Nation, vol. 194, No. 17, April 28, 1962, p. 369.

on the Effects of Atomic Radiation issued a report on the latest scientific evaluation of the hazards in growing radiation levels. "Even the tiniest doses, of additional radiation," the report said, "will unquestionably cause some hereditary damage in human beings. In doses far less than those that cause acute radiation sickness, exposure to fallout can be singled out as the cause of many types of human cancers, as well as many inherited abnormalities in children not yet born."[24]

More and more people continued to come out in support of a nuclear test ban treaty. One such group included twenty-one American business leaders. They issued their appeal in the form of a full-page advertisement in the Wall Street Journal. It stated that such a treaty would benefit both the United States and the Soviet Union, saying that any risks involved would be greatly outnumbered by the advantages of such a treaty. Some of the signers were Joseph L. Block, Chairman of the Inland Steel Company; James Symes, chairman of the Pennsylvania Railroad; Elisha Gray, chairman of the Whirlpool Corporation; Harry A. Bullis, former Chairman of General Mills; John T. Connor, president of Merck and Co.; William L. Clayton, former Under Secretary of State; and co-founder of Anderson Clayton & Co.; William E. Robinsen, former chairman of the Coca Cola Company; and Bowman Gray, chairman of the R. J. Reynolds Tobacco Company.[25]

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[24]"How Much can we take?" Business Week, Sept. 15, 1962, no. 1724, p. 25.

[25]"21 Business Leaders Urge the Nuclear-Test Ban Treaty," New York Times, June 24, 1963, p. 3.

Just after the signing of the treaty, an editorial in the New York Times encouraged the government to support the treaty that had been signed in Moscow. The editor stated that, "ratification of the treaty means no letup in our vigilance nor in our efforts to increase the effectiveness of our nuclear arsenal so long as that arsenal is needed. What it does mean is a start toward a reduction in tension, a foundation on which to build our search for more far-reaching agreements and a more stable world."[26]

Another argument for ratification was stated in an article in the New York Times. This was the adverse effect of fallout on certain states. The two states that were being affected most by the fallout from tests were Nevada and Utah. Often the radioactive-iodine falling out in the region around the test sight far exceeded the permissable radiation levels established by the Government. Radioactive-iodine when consumed tends to concentrate in the thyroid glands. Thus children drinking milk from cows that had foraged in contaminated pastures were receiving excessive doses to their thyroid glands. These overdoses were more serious to children than to adults, because their glands were just developing. In an interview with Dr. Eric Reiss, associate professor of medicine at the Washington University School of Medicine, he stated that he estimated about 3,000 children were drinking milk from cows that foraged in these contaminated pastures. Most often this milk was undiluted, which made it more potent

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[26] New York Times, [Editorial], Aug. 9, 1963, p. 22.

than milk drawn from a large milkshed would have been. From these 3,000 excessive doses, he estimated that there would be 10 or 12 cases of thyroid cancer.[27] This might not seem like a large amount when one considered the population of the entire country; but with continued testing, it was hard to estimate the damage that would be done to those living at the time and future generations, as some of the effects of radiation do not show up for several generations.

Because of the importance and international significance of the treaty, the President desired that the Senate act on it as soon as possible. On August 9, the President sent a message along with a copy of the treaty and a report by Acting Secretary of State, George W. Ball, which explained the treaty to the members of the Senate. In his message, President Kennedy strongly recommended that the Senate give its advice and consent to its ratification.[28] The treaty was referred to the Senate Committee on Foreign Relations, and the committee held hearings from August 12 until the 27th, 1963. Since the treaty bore heavily on military and technical questions as well as being of a political nature, the chairman of the Committee on Foreign Relations, Senator J. W. Fulbright of Arkansas, invited members of the Committee on Armed Services and Senate members of the Joint

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[27]John W. Finney, "Nevada Fallout Found a Hazard--Children Possibly Harmed Congress Panel is Told," New York Times, August 22, 1963, pp. 658-659.

[28]"President Sends Treaty to Senate," New York Times, Aug. 9, 1963, pp. 1-2.

Committee on Atomic Energy to sit jointly with the Committee on Foreign Relations, during the hearings on the treaty. The Committee on Foreign Relations had been consulted by the executive branch of the government several times during the negotiations of the treaty. Four members of the Committee on Foreign Relations (Chairman J. W. Fulbright, Senator John Sparkman of Alabama, Senator Hubert H. Humphrey of Minnesota, and Senator George D. Aiken of Vermont), one member of the Committee on Armed Services (Senator Leverett Saltonstall of Massachusetts), and one member of the Joint Committee on Atomic Energy (Chairman John O. Pastore of Rhode Island), had attended the ceremonies in Moscow when the treaty was signed on August 5, 1963. Also, the members of the above Committees had been involved in the problems of nuclear weapons at one time or another. Therefore, it was fitting that these three committees should meet together to consider the treaty.[29] The hearings on the treaty were designed to "explore its political, military, and technological implications as they are viewed by the most competent witnesses, official and nonofficial."[30]

The hearings were conducted in a completely bipartisan manner. They were to gather information on the possible effects of this treaty on the national interests of the United States. This information could then be

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[29]"Senate Committee Report," Documents on Disarmament, 1963, p. 459.

[30]Ibid., p. 459.

submitted to the Senate, where the decision would be made as to whether the treaty would be accepted or rejected.

In the hearings, the views given were overwhelmingly for the acceptance of the treaty. Upon request of the committee, former Presidents Truman and Eisenhower transmitted communications to the Committee (President Hoover was unable to comment because of ill health). They both supported the signing of the treaty. The only statement that former President Truman made was to Senator Fulbright over the phone where he stated, "I am in complete agreement with the approval of the treaty by the Senate."[31] On the other hand, former President Eisenhower had sent a letter to the committee in which he had expressed his views on the treaty. Eisenhower was concerned that it should be made clear that the United States could use any type of weaponry she deemed necessary in case of attack; and with this one reservation, he believed that the benefits of the treaty greatly outnumbered any risks involved. Eisenhower suggested the following risks: complacency resulting from the idea that the Soviet leaders had suddenly become completely trustworthy, a breaking up of the scientific groups that had kept the United States ahead in the development of nuclear capabilities, and the possibility of the Russians carrying on non-detected tests. However, he believed the advantages, such as the possibility that the signing of the treaty would create greater rifts between the Soviets and

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[31]Senate Hearings on Nuclear Test Ban Treaty, p. 846.

the Red Chinese, outweighed any disadvantages the treaty might have. Unless the hearings uncovered some new grave risk, Eisenhower would support the ratification of the treaty.[32]

Out of all of the official witnesses, only one was not in support of the treaty. This was Dr. John Foster, Director of the Lawrence Radiation Laboratory. His reasons for objecting to the treaty are discussed later on page 50. Those in favor included the Secretary of State, the Secretary of Defense, the Joint Chiefs of Staff and the Chairman of the Joint Chiefs of Staff, the Director of the Central Intelligence Agency, the Chairman of the Atomic Energy Commission, the Director of Defense Research and Engineering for the Department of Defense, the Technical Director of the Air Force Technical Application center, and the Director of the Los Alamos Scientific Laboratory. Besides the official witnesses, the Committee invited a number of former Government officials. Of the eight such people requested to give their opinions, five favored the treaty, one would have approved if a few reservations could have been made, and two were against the treaty. The final group of witnesses were public witnesses who had submitted timely requests to appear. Out of the twenty-five such witnesses, a majority supported the treaty.[33]

One of the first questions posed by the treaty was why had the Soviet Union suddenly agreed to a test ban treaty when she had been against just

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[32] Ibid., pp. 845-848.

[33] "Senate Committee Report," Documents on Disarmament, 1963, pp. 459-460. (A list of those who testified and how they testified can be found in Appendix D).

such a treaty for so many years. Since the Soviet Union did not have exactly a good record of abiding by treaties that she signed, could she be trusted? Dean Rusk, Secretary of State, answered both of these questions concerning the safeness of entering into an agreement with Russia in his testimony before the Committee. Secretary Rusk could not read the minds of the Soviets, but he could give an informed interpretation of possible reasons for the Soviets changing their policy on the treaty. According to Rusk, the Cuban missile crisis certainly had an effect on the Soviet Union. At this time, nuclear war became less an abstract possibiliy. "During this past year, for the first time in history, nuclear powers had to look at a nuclear exchange as an operational matter. Men had a chance to peer into the pit of the inferno."[34] When the possibility of immediate nuclear war had to be faced with the lives of millions of people at stake, the Soviets were certainly affected by the experience. Also, the Soviet Union was still concerned with improving the position of the Russian citizen, and these programs would have benefited if they could have received money that had previously been used in testing nuclear weapons.[35]

As to the problem of trusting the Russians, if one understood the nature of the treaty, this was no longer a problem. Secretary Rusk agreed that the past actions of Russia had proven she was a nation that could not be trusted. If the United States could have trusted the Soviet Union, the

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[34]Senate Hearings on Nuclear Test Ban Treaty, p. 33.

[35]Ibid., p. 33.

diplomats would have been negotiating a comprehensive test ban treaty instead of the limited treaty that was negotiated. The reasoning behind the limited treaty was that with this treaty the United States would not have to rely upon trusting the Soviet Union but could detect any breaking of the agreement with technical instruments in the United States. If violations were discovered, the United States was free to do whatever was necessary for its own security. With these provisions for a possible violation of the treaty, the question became not one of trusting the Russians but one of "is this treaty, if it is compiled with, in the interests of the United States."[36] Secretary Rusk believed the answer to this question was yes.

The testimony of the Joint Chiefs of Staff, represented in the hearings by the Chairman of the Joint Chiefs of Staff, General Maxwell Taylor, further reinforced the argument for the treaty. In their review of the treaty, they set aside past considerations of test ban treaties and focused their attention on this particular treaty. To judge the treaty, the Joint Chiefs of Staff established certain criteria to help them evaluate the treaty from a military standpoint: First, the United States should not accept the treaty if the Soviet Union could achieve an advantage in nuclear weapons technology that the United States could not overcome under the provisions of the treaty; Second, since it was possible the U.S.S.R. might take advantage of the treaty and do some clandestine testing, it had to be proven

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[36]Ibid., p. 27.

that if the Soviets did attempt clandestine tests, it would not have a serious adverse affect on the military balance of power; Third, it was important that it not be difficult for the United States to withdraw from the treaty in case of a treaty violation by another signer of the treaty or in the event that it became necessary to do so for national safety; Fourth, if the first two criteria were not met, there had to be compensatory advantages elsewhere in the treaty.

After studying the treaty, certain disadvantages were uncovered, such as the inability to conduct environmental tests of the weapons which might be acquired. But the disadvantages could be reduced, if certain safeguards were accepted. These safeguards included the following:

(a) The United States should continue underground testing to improve knowledge of nuclear weapons.

(b) Nuclear laboratories should be maintained.

(c) The United States should stay in a continued state of readiness to resume atmospheric testing, if such testing ever became necessary.

(d) There would be a continued effort to improve the facilities for monitoring the treaty.

If the above safeguards were observed, the treaty could have definite advantages in the field of international relations and the stopping of the spread of nuclear weapons, especially if other nations would sign the treaty. According to the Joint Chiefs of Staff, these two possibilities offset any

disadvantages that the treaty might have. Also, the treaty fulfilled the four criteria set up by the Joint Chiefs of Staff to a great enough degree to be acceptable.[37]

> In conclusion, the Joint Chiefs of Staff have reached the determination that while there are military disadvantages to the treaty, they are not so serious as to render it unacceptable . . . it is compatable with the security interests of the United States and we support its ratification. . . . It is the judgement of the Joint Chiefs of Staff that, if adequate safeguards are established, the risks inherent in this treaty can be accepted in order to seek the important gains which may be achieved through a stabilization of international relations and a move toward a peaceful environment in which to seek resolution of our differences.[38]

Secretary of Defense Robert McNamara also focused on the military benefits and risks of the treaty. At the time of these hearings, the Soviet Union appeared to be more advanced in weapons in the high yield range, which included those in the tens of megatons. Below that yield, the United States had performed many more tests and was therefore ahead of the Soviet Union. This advantage was an important one, according to Secretary McNamara. When one considered this along with the other facets of nuclear technology such as the numbers of weapons and their accuracy, the variety

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[37] Ibid., pp. 272-275.

[38] Ibid., pp. 275-76.

of systems, their dispersal, and the possible development of antiballistic missiles; the United States nuclear force was vastly superior to the Soviet Union's. Also, the United States could continue advancing in these areas under this treaty. For example, in the area of developing the anti-ballistic missile, the problems were dominated by factors not related to the treaty -- by reaction speed and missile performance. The conclusion reached by McNamara was that as far as the military aspects went the treaty was to the United States advantage to sign. [39]

Besides the political and military aspects of the treaty, the Committee considered its effects upon the use of atomic power for peaceful purposes. This was discussed by Dr. Glenn T. Seaborg, Chairman of the Atomic Energy Commission. That the Test Ban Treaty was advantageous to the United States military was agreed to by Secretary McNamara and the Joint Chiefs of Staff, but nuclear explosives also had possible future application for peaceful purposes. The reason these applications fell under the treaty was because the conditions under which they were tested were so similar to the conditions for testing nuclear weapons. The program for the peaceful use of nuclear explosives was named the Plowshare program. Included in this program were two categories. The first being in the area of direct application. This included such projects as excavation, mining, the recovery of oil and gas, and water resources development. At the time of these hearings, it had already been proven that in civil engineering projects

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[39] Ibid., pp. 100-109.

which required moving vast amounts of material, such as digging canals, if nuclear explosives were used, it would cost only a fraction of the amount that it would cost with conventional materials. It was decided that the treaty would not affect these projects. Most of these projects were accomplished by using nuclear explosions that produce very little radioactivity and emplanting them underground in such a way that most radioactivity was trapped underground. The second category was concerned more with scientific research. Any program in this field could also have been carried out by using underground testing as allowed by the treaty. In fact, Dr. Seaborg believed that in this area nuclear explosives used in an underground environment would serve as a new and unique laboratory for experiments. The only case out of the Plowshare program where nuclear explosives could not be used would be in a situation where nuclear explosives were used for making a new Isthmian Canal. This would be impossible because of the difficulty of keeping all radioactivity within the boundaries, since the boundaries were so close together. As the result of these observations, Dr. Seaborg concluded that the United States could successfully continue the Plowshare program under the limited Test Ban Treaty.[40]

Another major consideration of the Foreign Relations Committee was whether the treaty might inhibit the United States in cooperating with her allies for defensive purposes. First, this treaty would not interfere

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[40] Ibid., pp. 210-212.

with the cooperative relationship between the United States and the United Kingdom on nuclear weapons matters. Also, the Atomic Act of 1954, as amended, already forbade transferring parts of fissionable material for use in nuclear weapons to allies which were not nuclear powers. Similarly, it forbade the communication of data to assist a nation in the design, development, or fabrication of nuclear weapons unless that nation had already made substantial progress in developing them.[41] Therefore, the Test Ban Treaty did not have any bearing upon the United States' relations with her allies.

However, there were certain cases where the United States would not be allowed to transmit nuclear data to another nuclear power. This was discussed in a letter from Secretary Rusk to Senator Fulbright. According to Secretary Rusk, the United States would be prohibited from giving information to any country which was conducting tests prohibited by the treaty. On the other hand, the United States would be able to continue supplying countries with information, materials, and equipment relating to the peaceful use of atomic energy.[42]

As was mentioned earlier, the only official witness at the Senate Committee Hearings to testify against the treaty was Dr. John S. Foster, Jr., Director of Lawrence Radiation Laboratory, Livermore, California. His disagreements were purely technical. He believed that the treaty might restrict United States knowledge of what might be technically

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[41]"Senate Committee Report," Documents on Disarmament, 1963, p. 475.

[42]Senate Hearings on Nuclear Tests Ban Treaty, pp. 976-977.

possible. He allowed that this might prove to be an advantage to the United States as well as to the Soviet Union, but he thought it the duty of the United States to maintain a scientific climate which would not discourage such developments.[43]

In addition to those that testified in the committee hearings, there were several groups who sent in their views on the treaty. The majority of these urged its ratification. A statement by the AFL-CIO encouraged the Senate to pass the treaty. The AFL-CIO believed that this treaty offered an excellent chance to end the danger of radioactive fallout in the atmosphere.[44] Another organization that supported the treaty was the Federation of American Scientists, who believed, "it would be a national catastrophe if the pending test ban agreement was not ratified by the U.S. Senate."[45] Also, thirty-five Nobel Laureates voiced their support of the treaty. They stated, "We believe that this treaty marks a significant if minimal first step in reducing the tensions of a continued nuclear arms race, thereby enhancing the security of the United States."[46]

The only organization to come out strongly against the treaty was the Young Americans for Freedom. Their stand was that this treaty would allow the Russians to gain a military advantage. The Soviet Union could

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[43] Ibid., p. 616.

[44] Ibid., p. 879.

[45] Ibid., p. 897.

[46] Ibid., p. 247. (The names of the Nobel Laureates can be found in Appendix E).

not be trusted, and it could only harm the United States to sign the treaty. It would be a capitulation to Communism.[47]

After hearing witnesses both pro and con on the treaty, the Committee on Foreign Relations found the balance of risks weighted in favor of the treaty. They realized that by testing underground, the Soviet Union might erase the technological lead the United States had in some critical areas of development; but through the hearings, it became equally evident that this gap might be closed even faster if unrestricted testing were continued. Most of what the United States still needed to know could be discovered through underground testing. The stage had been reached where the returns on further atmospheric testing were diminishing.

Dr. Edward Teller of the University of California dissented from this general view saying, "This treaty will not prevent the arms race. It will stimulate it. This treaty is not directed against the arms race. This treaty is directed against knowledge, our knowledge."[48] Dr. Teller believed that this treaty would permit anyone to develop many types of aggressive weapons, but it would not permit anyone to acquire the knowledge about the effects of these weapons which was of such importance in ballistic missile defense.[49]

Most of the scientists did not agree with Dr. Teller. One who

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[47] Ibid., p. 719.

[48] Ibid., p. 423.

[49] Ibid., p. 422.

dissented was Dr. Herbert York, Chancellor of the University of California at San Diego. He had, also, served as Director of Defense, Research, and Engineering for three and one-half years during the Eisenhower administration. According to Dr. York, it was not necessary to continue with unlimited development in the field of nuclear weapons. He stated, "In fact, I believe that if we were to do that as I have said in my testimony, it would only lead to a worsening of the situation. I believe it is necessary to look elsewhere for a solution to our present problems."[50] The unlimited development of nuclear weapons the United States had been engaging in had not led to any solutions to the problems of the world, and it was not logical to believe that they would in the future.

The Foreign Relations Committee agreed with Dr. York. It believed the treaty was directed against the arms race. As the committee stated:

> Perhaps the ultimate knowledge of nuclear ballistic missiles--at least, the only certain test of the missile systems--would mean launching a large salvo of ballistic missiles with nuclear warheads over a distance of several thousand miles and intercepting these weapons with antiballistic missiles, also equipped with warheads.[51]

Certainly no one would suggest going to this extent to test nuclear weapons, so it became just a question of to what degree one wanted to go.

The danger of increased nuclear fallout that would result from

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[50] Ibid., p. 766.

[51] "Senate Committee Report," pp. 479-480.

unlimited nuclear testing had to be considered by the committee more than it had been considered by Dr. Teller. An Atomic Energy Commission Press Release of October 31, 1961 was considered in the hearings. This discussed the effects of nuclear detonations. According to this report, five-megaton surface detonations could cause first-degree burns to exposed skin out to a slant range of about 25 miles. Also, "The debris spread worldwide (as distinguished from local) from all past nuclear tests of all nations prior to resumption by Soviets of atmospheric tests on September 1, 1961, was estimated to have been the equivalent of 60 megatons of fission yield. Thus, for example a 100-megaton detonation (50 megatons of fission) might produce almost as much worldwide radioactivity as all past tests to November 3, 1958,"[52] The possibility of the danger of increased atmospheric fallout had to be considered by the committee in making a decision on the treaty.

In presenting the committee report to the Senate in September, the Committee urged the Senate to pass it. The vote in the Foreign Relations Committee had been 16 to 1 in favor of ratification of the treaty.[53]

Before, the treaty was voted on in the Senate, there were eleven days of formal debate. Most of the arguments in favor of the treaty had also been presented in the report of the Foreign Relations Committee

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[52] Ibid., p. 998.

[53] Ibid., p. 483.

hearings. The opposition was led by Senator Barry Goldwater from Arizona. The Senator had expressed his views on disarmament in his book Why Not Victory, published in 1962 in which he stated that disarmament was not in the national interest. Goldwater presented his views on the treaty in the Senate debate.

The only argument that he could see in favor of the treaty was the hope that this might be the first step towards easing tension in the world. However, he did not believe that nuclear weapons were the cause of the tension or that the disappearance of nuclear weapons would in any way help to ease the tension. Communism would still remain as the aggressor.[54]

As long as Senator Goldwater's perception of Russia was that of a nation remaining "dedicated to aggression and obsessed by its irrational vision of man as a mere cog in the machine of history, the only policy he could see for the United States was that of building bigger and better weapons. Until the objectives of Communism changed, he would never vote for a test ban treaty. In opposition to the testimonies of the Joint Chiefs of Staff, Defense Secretary McNamara, and the large majority of the scientists, Senator Goldwater believed the treaty would erode the military strength of the United States. As he stated, "I will vote against this treaty because it preserves the enemy's advances in high-yield weaponry while freeing them to overtake our lead in low-yield research. We pay the price; they do not."[55]

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[54]U. S., Congressional Record, 88th Congress, 1st Session, 1963, vol. 109, part 13, p. 17557.

[55]Ibid., p. 17558.

The problem was reduced to the question of whether the United States could successfully defend herself with the size weapons already developed, or whether the United States needed to develop larger weapons, which would require atmospheric testing. Certainly, Russia, if she obeyed the treaty, could not develop any larger bombs under the treaty than could the United States. The question the Senators had to decide was whether or not the United States had the right to continue endangering the lives of people with radioactive fallout from atmospheric tests when virtually every authority believed the United States could at worst remain on a par and perhaps keep ahead in the arms race under the proposed treaty.

When the Senate finally voted on the treaty, on September 24, 1963, a large majority voted for the treaty.[56] Those voting against it were mostly, judging from their statements in the Senate, followers of Senator Goldwater who believed that the Russians were trying to trick the United States into signing a treaty that would be detrimental to the national defense. A majority in the Senate saw the treaty as a step in the right direction, as a step towards easing the tension in the world through removing much of the danger of nuclear fallout and easing the tension of the arms race. It was not seen as a concession to the Communists, because the United States would remain on guard for violations of the treaty, ready to start atmospheric testing if breaches by other signers of the treaty were

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[56] The way the individual senators voted can be found in Appendix F.

discovered. Yet, if it was discovered that the Russians would abide by this agreement, then the United States would have a sounder basis for trusting them in future agreements. Though the United States defense program needed to keep the country prepared for a war, the United States could also strive for peace. President Kennedy expressed this attitude in a speech he gave at the University of Maine, October 19, 1963. He said:

> Therefore, while maintaining our readiness for war, let us not exhaust every avenue for peace . . . . In short, when we think of peace in this country, let us think of both our capacity to deter aggression and our goal of true disarmament. Let us think of both the strength of our Western alliances and the areas of East-West cooperation.[57]

With the ratification of this treaty, the Kennedy Administration became the first to negotiate a treaty dealing with the control of nuclear weapons. This treaty was significant because it would reduce fallout and hopefully slow down the arms race and create a more friendly diplomatic situation for future negotiations. The trend that had begun in the Eisenhower Administration continued under President Kennedy. Disarmament was regarded as a strategy rather than a Utopian ideal. In the hearings of the Committee on Foreign Relations and in the debate in the Senate, the treaty was considered on the basis of whether or not it

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[57]"Address by President Kennedy at the University of Maine, October 19, 1963," U.S. Dept. of State Bulletin, Nov. 4, 1963, p. 697.

would be an advantage to the United States to follow the strategy of disarmament. This was made evident by the fact that in the hearings both the Secretary of Defense and the Joint Chiefs of Staff testified in favor of the treaty on the basis of its military objectives, and the fact that Secretary Rusk defended the treaty as being to the advantage of the United States from a political standpoint. The United States realized that total disarmament on a world-wide scale was impossible to obtain with one treaty and had begun working for limited disarmament in hopes that this would lead to a better understanding among nations. This treaty could then serve as the first step towards a more total program of disarmament.

EPILOGUE

After passing the Partial Test Ban Treaty, the United States continued to be concerned about obtaining a ban on all types of tests, but interest centered more around a non-proliferation treaty. In President Lyndon B. Johnson's first address to the Eighteen-Nation Committee on Disarmament on February 10, 1964, he encouraged the members to work towards such a treaty. He proposed, "that nuclear weapons not be transferred into the national control of states which do not now control them, and that all transfers of nuclear materials for peaceful purposes take place under effective international safeguards."[1]

As President Eisenhower had received Senate approval of his attempts to secure a test ban agreement, President Johnson obtained the approval of the Senate for his work towards a treaty that would help stop the spread of nuclear weapons to countries not possessing them. In 1966 the Senate passed a resolution which stated that it would support the President's efforts to negotiate a treaty which would deal with the non-proliferation of nuclear weapons.[2]

On March 11, 1968, a treaty for the Non-Proliferation of Nuclear

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[1] "President Johnson Urges Disarmament Conference to Take Further Steps Toward Peace," (to Conference of the 18-Nation Committee on Disarmament), U.S. Dept. of State Bulletin, vol. I, Feb. 10, 1964, p. 225.

[2] U.S., Congressional Record, Senate, vol. 112, pt. 8, 89th Congress, 2nd Session, May 3, 1966, to May 18, 1966, p. 10802.

Weapons was presented to the Eighteen-Nation Committee. This was signed by the representatives of three of the major nuclear powers, the United States, United Kingdom, and Soviet Union. France and China did not sign the treaty.

This treaty committed the nations signing the treaty, which did not already have nuclear weapons, not to produce or receive them in the future. This would not prevent these nations from having the full benefits of the peaceful use of atomic powers. Also, it expressed the hope that this treaty would lead to further progress towards arms control and disarmament.[3]

Though this treaty was introduced during the last year of President Johnson's administration, the senate did not consent to ratification until 1969, after President Richard M. Nixon's inauguration. President Nixon supported the treaty as President Johnson had done. He had not been in office long before he spoke to the Senate encouraging it to give its advice and consent of the treaty.

On March 13, 1969, the Senate voted for the treaty in an 83-15 roll call vote.[4] At the time, the President signed it, only eleven of the 87 nations that had signed the treaty had completed ratification. Therefore, the treaty could not be effective for another year at the minimum.[5]

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[3]U.S. Congress, Committee on Foreign Relations, Hearings on Non-proliferation Treaty, 90th Congress, 2nd Session, 1968, p. 4.

[4]"Senate Ratifies Nuclear Nonproliferation Treaty," Congressional Quarterly, vol. 27, March 14, 1969, p. 363.

[5]"The Nonproliferation Treaty; Another Step," Time, March 21, 1969.

This treaty did not receive as much public attention as the Partial Test Ban Treaty had. Yet most of the comments on the treaty were favorable. As Betty Pilkington writing for Commonweal stated, "In fact, the treaty is a good, if modest, beginning."[6] Even though, as with the Kennedy treaty, this agreement was not all that had been hoped for, it was a beginning; and a beginning was better than no progress at all. The United States had decided by this time that if she could not negotiate a total agreement, it was better to compromise than to give up. The Bulletin of the Atomic Scientists also carried an article in favor of this treaty. As its authors admitted, this treaty did not prevent any nation already possessing atomic weapons from building up its nuclear stockpile, but it asserted the similar interests of all signing nations to slow down the spread of nuclear weapons.[7]

The push for nuclear disarmament is not as strong today as it has been in the past. It began after the world realized the horror of the atomic bomb on Hiroshima. The first proposals of the United States centered around world control of atomic weapons; the Baruch Plan was such a program. After the Soviet Union and other nations acquired the atomic bomb, the aim became complete nuclear disarmament. Gradually the United States began working towards more attainable goals. Deciding a program for total

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[6]Betty Pilkington, "Non-Proliferation: Two Views," Commonweal, vol. 39, March 14, 1969, pp. 721-23.

[7]"NPT: Movement Toward a Viable World," Bulletin of the Atomic Scientists, April 1969, p. 48.

disarmament could not be agreed upon with the Soviet Union, she began to work for disarmament one step at a time. The first step was negotiating a nuclear test ban treaty. This was partially reached by the treaty of 1963. The United States is still working towards an agreement to ban underground tests. The next goal was to slow down the acquiring of atomic weapons by other nations. The treaty for the Non-Proliferation of Nuclear Weapons would help achieve this goal. Even though the problem of disarmament does not seem to be as much in the public eye as it once was, having reached its peak in 1963 with the increased concern over nuclear fallout, it would be to the benefit of the United States, and the rest of the world, if President Nixon and succeeding presidents would continue to work for continued progress in the area of nuclear disarmament.

APPENDIX A

THOSE IN ATTENDANCE AT THE CONFERENCE OF EXPERTS TO STUDY THE POSSIBILITY OF DETECTING VIOLATIONS OF A POSSIBLE AGREEMENT ON THE SUSPENSION OF NUCLEAR TESTS, AUGUST 21, 1958

Western Experts

Dr. James B. Fisk
Dr. Robert F. Bacher
Sir John Cockcroft
Dr. Ernest O. Lawrence
Sir William Penney
Prof. Yves Andre Rocard
Dr. O. M. Solandt

Delegations of:

Union of Soviet Socialist Republics

Ye. K. Fedorov
N. N. Semenov
I. Ye. Tamm
M. A. Sadovskiy
O. I. Leypunskiy
I, P. Pasechnik
K. Ye. Gubkin
S. K. Tsarapkin

Polish People's Republic

M. Miesowica
L. Jurkiewica
M. Blusztajn

Czechoslovak Republic

C. Simane
F. Behounek
A. Zatopek
Z. Trihlik

People's Republic of Romania

H. Hulubei

"Communique and Report of the Conference of Experts to Study the Possibility of Detecting Violations of a Possible Agreement on the Suspension of Nuclear Tests, August 21, 1958," Documents on Disarmament, 1945-59, vol. II, p. 1111.

APPENDIX B

ESTIMATED ANNUAL NUMBER OF UNIDENTIFIED WORLDWIDE CONTINENTAL EARTHQUAKES

	5kt & greater	10 kt & greater	20 kt & greater
Estimate -- Geneva Conference of Experts, Aug., 1958	20-100	_____	_____
Estimate -- Geneva Network and equipment on basis of Hardtack data, Jan., 1959	1,500	400	60
Estimate -- Geneva Network with improvements within the present state of technology on basis of Hardtack data, April, 1959	300	40	15

"Panel on Seismic Improvement Reports Findings on Underground Explosions," U.S. Dept. of State Bulletin, vol. 41, p. 18, July, 1959.

APPENDIX C

Treaty
Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water

The Governments of the United States of America, the United Kingdom of Great Britain and Northern Ireland, and the Union of Soviet Socialist Republics, hereinafter referred to as the "Original Parties",

Proclaiming as their principal aim the speediest possible achievement of an agreement on general and complete disarmament under strict international control in accordance with the objectives of the United Nations which would put an end to the armaments race and eliminate the incentive to the production and testing of all kinds of weapons, including nuclear weapons,

Seeking to achieve the discontinuance of all test explosions of nuclear weapons for all time, determined to continue negotiations to this end, and desiring to put an end to the contamination of a man's environment by radioactive substances,

Have agreed as follows:

Article I

1. Each of the Parties to this Treaty undertakes to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion, at any place under its jurisdiction or control:

(a) in the atmosphere; beyond its limits, including outer space; or underwater, including territorial waters or high seas; or

(b) in any other environment if such explosion causes radioactive debris to be present outside the territorial limits of the State under whose jurisdiction or control such explosion is conducted. It is understood in this connection that the provisions of this subparagraph are without prejudice to the conclusion of a treaty resulting in the permanent banning of all nuclear test explosions, including all such explosions underground, the conclusion of which, as the Parties have stated in the Preamble to this Treaty, they seek to achieve.

2. Each of the Parties to this Treaty undertakes furthermore to refrain from causing, encouraging, or in any way participating in, the carrying out of any nuclear weapon test explosion, or any other nuclear explosion, anywhere which would take place in any of the environments described, or have the effect referred to, in paragraph 1 of this Article.

Article II

1. Any Party may propose amendments to this Treaty. The text of any proposed amendment shall be submitted to the Depositary Governments which shall circulate it to all Parties to this Treaty. Thereafter, if requested to do so by one-third or more of the Parties, the Depositary Governments shall convene a conference, to which they shall invite all the Parties, to consider such amendment.

2. Any amendment to this Treaty must be approved by a majority of the votes of all the Parties to this Treaty, including the votes of all of the Original Parties. The amendment shall enter into force for all Parties upon the deposit of instruments of ratification by a majority of all the Parties, including the instruments of ratification of all of the Original Parties.

Article III

1. This Treaty shall be open to all States for signature. Any State which does not sign this Treaty before its entry into force in accordance with paragraph 3 of this Article may accede to it at any time.

2. This Treaty shall be subject to ratification by signatory States. Instruments of ratification and instruments of accession shall be deposited with the Governments of the Original Parties--the United States of America, the United Kingdom of Great Britain and Northern Ireland, and the Union of Soviet Socialist Republics--which are hereby designated the Depositary Governments.

3. This Treaty shall enter into force after its ratification by all the Original Parties and the deposit of their instruments of ratification.

4. For States whose instruments of ratification of accession are deposited subsequent to the entry into force of this Treaty, it shall enter into force on the date of the deposit of their instruments of ratification of accession.

5. The Depositary Governments shall promptly inform all signatory and acceding States of the date of each signature, the date of deposit of

each instrument of ratification of and accession to this Treaty, the date of its entry into force, and the date of receipt of any requests for conferences or other notices.

6. This Treaty shall be registered by the Depositary Governments pursuant to Article 102 of the Charter of the United Nations.

Article IV

This Treaty shall be of unlimited duration.

Each Party shall in exercising its national sovereignty have the right to withdraw from the Treaty if it decides that extraordinary events, related to the subject matter of this Treaty, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to all other Parties to the Treaty three months in advance.

Article V

This Treaty, of which the English and Russian texts are equally authentic, shall be deposited in the archives of the depositary Governments. Duly certified copies of this Treaty shall be transmitted by the Depositary Governments to the Governments of the Signatory and acceding States.

IN WITNESS WHEREOF the Undersigned, duly authorized, have signed this Treaty.

DONE in triplicate at the city of Moscow the day of , one thousand nine hundred and sixty-three.

For the Government of the United States of America

For the Government of the United Kingdom of Great Britain and Northern Ireland

For the Government of the Union of Soviet Socialist Republics.

"Text of Treaty," U.S. Department of State Bulletin, August 12, 1963, pp. 239-240.

APPENDIX D

THOSE TESTIFYING IN THE SENATE FOREIGN RELATIONS COMMITTEE HEARINGS ON NUCLEAR TEST BAN TREATY

For Ratification

Behre, C. Edward, director, the Cooperative League of the U.S.A.
Bradbury, Dr. N. E., Director of the Los Alamos Scientific Laboratory.
Brennan, Donald G., president, the Hudson Institute, representing Federation of American Scientists
Brown, Harold, Director of Defense, Research, and Engineering, Department of Defense.
Carey, James B., secretary-treasurer, Industrial Union Department, AFL-CIO, and president International Union of Electrical, Radio & Machine Workers of America.
Cousins, Norman, editor, Saturday Review.
Dean, Arthur, New York City.
Deykin, Daniel, M.D., representing the Physicians for Social Responsibility.
Dyson, Freeman J., Institute for Advance Study, Princeton, representing the Federation of American Scientists.
Gottlieb, Sanford, political action director, National Committee, National Committee for a Sane Nuclear Policy.
Hutchinson, Mrs. Aileen, Women Strike for Peace, Washington, D.C.
Kistiakowsky, Dr. George B., Harvard University.
LeMay, Gen. Curtis E., U. S. Air Force.
Libby, Willard F., Department of Chemistry, University of California
McDonald, Adm. David L., U. S. Navy.
McIntire, Carl, president, International Council of Christian Churches.
McNamara, Hon. Robert S., Secretary of Defense.
Meany, George, president, American Federation of Labor and Congress of Industrial Organizations.
Meselson, Matthew, Council for a Livable World, Harvard University.
Neilan, Edwin P., president, the Chamber of Commerce of the United States. Favored, but had a few reservations about the treaty.
Reissig, Herman F., Council for Christian Social Action, United Church of Christ.
Rice, Andrew E., American Veterans Committee, Inc.
Rothschild, Brig. Gen. J. H., on behalf of United World Federalists, Inc.
Rusk, Hon. Dean, Secretary of State.
Shulman, Marshall Darrow, professor of international politics, the Fletcher School of Law and Diplomacy.
Seaborg, Dr. Glenn T., Chairman of AEC.

Shoup, Gen. David M., U.S. Marine Corps.
Stassen, Harold E., Philadelphia, Pa.
Strausz-Hupe, Robert, director, Foreign Policy Research Institute.
Taylor, Gen. Maxwell D., Chairman of the Joint Chiefs of Staff.
Warburg, James P.
Watson, Arthur, president, William Penn College, representing the Friends Committee on National Legislation.
Weaver, Rev. E. Paul, district executive secretary for northern Indiana, Church of the Brethren.
Wheeler, Gen. Earle G., U.S. Army
Wilcox, Francis O., dean, School of Advanced International Studies, Johns Hopkins University, representing National Council of the Churches of Christ in the U.S.A.
York, Dr. Herbert, Chancellor, University of California, San Diego.

Against Ratification

Andrews, Stanley M., executive director, Americans for National Security.
Bauman, Robert E., national chairman, Young Americans for Freedom, Inc.
Foster, Dr. John S., Jr., director, Lawrence Radiation Laboratory, Livermore, Calif.
Morris, Robert, Dallas, Tex.
Pillon, Hon. John R., U.S. Congressman from New York.
Schlafly, Mrs. Phyllis, Alton, Ill.
Strauss, Adm. Lewis L., Washington, D.C. He was against the treaty, but assuming it would be ratified, he offered suggestions.
Teller, Edward, University of California.

United States Senate. Committee on Foreign Relations. Hearings on Nuclear Test Ban Treaty. 88th Congress, 1st Session, U.S. Govt. Printing Office, 1963, pp. III-IV.

APPENDIX E

SIGNERS OF STATEMENT BY NOBEL LAUREATES ON NUCLEAR TEST BAN TREATY

Anderson, Carl David, professor of physics, California Institute of Technology. Nobel Prize in physics, 1936.

Brattain, Walter Houser, Bell Telephone Laboratories, Murrayhill, N. J. Nobel Prize in physics, 1956.

Bloch, Felix, professor of physics, Stanford University, Stanford, Calif. Born Zurich, Switzerland. Nobel Prize in physics, 1952.

Chamberlain, Owen, Physics Department, University of California, Berkeley. Nobel Prize for physics for discovering antiproton, 1959.

Cournand, Andre F., 1361 Madison Avenue, New York, N. Y.; born Paris, France, naturalized 1941. Nobel Prize in medicine and physiology, 1956.

Enders, John Franklin, professor, Children's Hospital, Harvard Medical School, 300 Longwood, Boston, Mass. Nobel Prize in medicine and physiology, 1954.

Erlanger, Joseph, 5127 Waterman Avenue, St. Louis, Mo. Nobel laureate in physiology, 1944.

Doisy, Edward Adelbert, St. Louis University School of Medicine, St. Louis, Mo. Professor of biochemistry; shared Nobel Prize in physiology and medicine; 1943, with Dr. Henrik Dam.

Franck, James, address: care of Physics Department, Duke University, Durham, N.C. Professor of physics and chemistry. Nobel Prize in physics, 1925.

Glaser, Donald A., radiation laboratory, University of California, Berkeley, Calif. Physicist. Nobel Prize in physics, 1960.

Hofstadter, Robert, professor of physics, Stanford University, Stanford, Calif. Nobel Prize for physics with Dr. Moessbauer 1961 for work on atomic nucleus.

Kornberg, Arthur, head, Department of Biochemistry, Stanford University, Stanford, Calif. Corecipient, Nobel Prize in medicine, 1959.

Kusch, Polykarp, Columbia University, Physics Department, New York, N. Y. Nobel Prize in physics, 1955; born Germany, naturalized 1922.

Lamg, Willis Eugene, Jr., Clarendon Laboratory, Oxford, England. Nobel Prize in physics, 1955.

Lee, Tsung-Dao, professor of physics, Institute for Advanced Study, Princeton, N. J. Physicist. Nobel Prize in physics, 1957.

Lipmann, Fritz Albert, Rockefeller Institute, New York, N. Y. Biochemist. Nobel Prize for medicine and physiology, 1953.

Muller, Hermann Joseph, professor of zoology, Indiana University, Jordan Hall, Bloomington, Ind. Nobel laureate in physiology, medicine, 1946.

Murphy, William Parry, physician; 1101 Beacon Street, Brookline, Mass. Nobel Prize in medicine 1934.

Ochoa, Severo, New York University, College of Medicine, 550 First Avenue, New York, N. Y. Biochemist; Nobel Prize 1959 in medicine with Arthur Kornberg.

Pauling, Linus Carl, professor of chemistry, California Institute of Technology, Pasadena, Calif.; Nobel Prize in chemistry 1954.

Rabi, Isidor Isaac, Columbia University, Department of Physics, New York. Nobel Prize in physics 1944.

Richards, Dickinson W., 180 Fort Washington Avenue, New York, N. Y. Nobel Prize in medicine and physiology 1956.

Seaborg, Glenn, Chairman, Atomic Energy Commission, Washington, D. C. Nobel Prize in chemistry, 1951.

Segre, Emilio, University of California, Berkeley, Calif. Nobel Prize in physics 1959.

Shockley, William Bradford, Shockley transistor unit, clevite transistor, Stanford Industrial Park, Palo Alto, Calif. Physicist: Nobel Prize in physics 1956.

Stanley, Wendell M., University of California, Berkeley, Calif., Department of Virology. Nobel Prize in chemistry 1946.

Stern, Otto, 759 Cragmont Street, Berkeley, Calif. Nobel Prize in physics, 1943.

Szent-Gyorgyi, Albert, biochemist Marine Biological Lab., Woods Hole, Mass., Nobel Prize in medicine, 1937 and 1955.

Tatum, Edward Lawrie, Rockefeller Institute, 66th Street and York Avenue, New York, N. Y., Biochemist; Nobel Prize for medicine and physiology, 1958.

Urey, Harold Clayton, professor of chemistry at large, University of California. Nobel Prize in chemistry in 1934.

von Beckesy, Georg, Harvard University, Cambridge, Mass. Nobel Prize for medicine for research on how the human ear hears, 1961.

Waksman, Selman Abraham, Rutgers University, New Brunswick, N. J. Nobel Prize in medicine, 1952.

Watson, James Dewey, professor of biology, Harvard University, Cambridge, Mass., Biochemist, educator; Nobel Prize, 1963.

Whipple, George Hoyt, pathologist, University of Rochester, Rochester, N. Y., Nobel Prize in medicine, joint ward, 1934.

Purcell, Edward Mills, professor of physics, Harvard University, Cambridge, Mass. Nobel Prize in physics, 1952.

United States Senate. Committee on Foreign Relations. Hearings on Nuclear Test Ban Treaty. 88th Congress, 1st Session, U.S. Govt. Printing Office, 1963, pp. 247-250.

APPENDIX F

THE TREATY VOTE

For Ratification

Democrats

Anderson, N. Mexico
Bayh, Ind.
Brewster, Md.
Cannon, Nev.
Clark, Pa.
Douglas, Ill.
Ellender, La.
Fulbright, Ark.
Gruening, Alaska
Harlke, Ind.
Hill, Ala.
Humphrey, Minn.
Jackson, Wash.
Jordan, N. C.
Long, Mo.
Mansfield, Mont.
McGee, Wyo.
McIntyre, N. H.
Metcalf, Mont.
Morse, Ore.
Muskie, Me.
Neuberger, Ore.
Pell, R. I.
Randolph, W. Va.
Smathers, Fla.
Symington, Mo.
Williams, N. J.
Young, Ohio

Bartlett, Alaska
Bible, Nev.
Burdick, N. Dak.
Church, Idaho
Dodd, Conn.
Edmondson, Okla.
Ervin, N. C.
Gore, Tenn.
Hart, Mich.
Hayden, Ariz.
Holland, Fla.
Inouye, Hawaii
Johnston, S. C.
Kennedy, Mass.
Magnuson, Wash.
McCarthy, Minn.
McGovern, S. Dak.
McNamara, Mich.
Monroney, Okla.
Moss, Utah
Nelson, Wis.
Pastore, R. E.
Proxmire, Wis.
Ribicoff, Conn.
Sparkman, Ala.
Walters, Tenn.
Yarborough, Texas

Republicans

Aiken, Vt.
Beal. Md.
Carlson, Kans.
Cooper, Ky.
Dirksen, Ill.
Fong, Hawaii

Allot, Colo.
Boggs, De.
Case, N. J.
Cotton, J. H.
Dominick, Colo.
Hickenlooper, Iowa

Hruska, Neb.
Keating, N. York
Miller, Iowa
Mundt, S. Dak.
Prouty, Vt.
Scott, Pa.
Young, N. D.

Javits, N. York
Kuchel, Calif.
Morton, Ky.
Pearson, Kans.
Saltonstall, Mass.
Williams, Del.

Against Ratification

Democrats

Byrd, Va.
Eastland, Miss.
Long, La.
Robertson, Va.
Stennis, Miss.
Thurmond, S. C.

Republicans

Bennett, Utah
Goldwater, Ariz.
Mechem, N. Mex.
Smith, Me.

Curtis, Neb.
Jordan, Idaho
Simpson, Wyo.
Tower, Texas

Absent: Democrat Clair Eugle of California, recuperating from brain surgery at Bethesda (Md.) Naval Hospital; he sent word that if he had been present he would have voted yea. *

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THE DIPLOMACY OF THE TEST BAN TREATY
THE U. S. POSITION

by

MARTHA SUE PETERSON

B. A., Utah State University, 1967

AN ABSTRACT OF A

MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF ARTS

Department of History

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1970

When the United States dropped the atomic bomb on Hiroshima, the world became aware of a weapon more powerful than anything that had existed before. The universal reaction to this event was that something must be done to control atomic weapons. This thesis deals with the attempts of the United States to develop such a program.

The first step taken by the United States, while President Truman was in office, was to set up a national program for controlling the development of atomic energy. The Atomic Energy Commission was established in 1946; and immediately after this, the United States turned her attention to developing an international program. During June of 1946, Bernard Baruch, the United States Representative to the United Nations, presented the first United States attempt at an atomic weapons control program. This was rejected by the Soviet Union. The Soviet Union wanted an opportunity to become an atomic power, as she did by exploding her first atomic bomb in 1949. During the latter part of the Truman administration, the Korean War slowed down any type of disarmament plans.

Under President Eisenhower, the United States continued to work for some type of a program to control atomic weapons. At the beginning of his administration, all of the proposals were still for fairly comprehensive nuclear disarmament. This emphasis changed, and the United States began separating the problem of banning nuclear tests from that of complete nuclear disarmament. This change was mainly the result of growing world concern

over the increase of nuclear fallout in the atmosphere and findings by the Geneva Conference of Experts that a test ban would be possible to enforce. After the decision was made to try for a test ban, negotiations began at the Geneva Conference for the Discontinuance of Nuclear Weapons Tests. At the same time, the Ten-Nation Committee on Disarmament was discussing more comprehensive disarmament programs. When the Soviet Union walked out of the Ten-Nation Committee in June of 1960, the negotiations at the Geneva Conference became futile. The Eisenhower administration ended with no disarmament conference in session, and the outlook for the future quite dim. However, President Eisenhower had succeeded in getting the United States to work for disarmament a step at a time, which meant the next president could begin working for atomic weapons control in a much more realistic manner.

John F. Kennedy had come out in favor of a test ban treaty while he was still a senator. After becoming president, he continued to work toward this goal. The result of his efforts was the Partial Test Ban Treaty which the Senate approved ratification of in September of 1963. The hearings in the Senate Foreign Relations Committee demonstrated that the United States was able to consider such measures for nuclear control on the basis of whether or not they were in the national interest, instead of analyzing them as they would a Utopian proposal that could not be considered seriously.

After the signing of the Partial Test Ban Treaty, the United States has continued to work for nuclear weapons control. The most obvious example

of this was the Nuclear Nonproliferation Treaty passed by the Senate on March 13, 1969. Nuclear disarmament has concerned the United States since Hiroshima and will continue to be a problem as long as nations possess nuclear weapons.