THE NUCLEAR TESTING POLICIES OF THE EISENHOWER ADMINISTRATION, 1953-60

by

Martha J. Smith

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ABSTRACT


This thesis focusses on the nuclear testing policies of the Eisenhower administration in the period 1953-60. Specifically, it analyses the decisions made by the president, the secretary of state, and key bureaucracies: the Atomic Energy Commission, the Department of Defence, the State Department, and the Central Intelligence Agency. This study also examines the international implications of these policies, including the impact of American nuclear explosions on countries like Japan. In addition, it analyses the influence of other nuclear powers, notably Great Britain and the Soviet Union, on the U.S. decision-making process.

The dissertation challenges the view held by some historians that the United States seriously pursued a comprehensive test ban treaty in the 1950s. It concludes that the U.S. policy underwent very little change during this period, despite mounting international pressure in favour of a halt to testing. American inflexibility resulted from a divided administration. Increasingly aware of the international political advantages to be gained from a treaty, the State Department, led by John Foster Dulles, and the President's Special Assistant for Disarmament, Harold Stassen, advocated a change in the U.S. policy. From 1955 to 1957, Stassen proposed a moratorium during the UN Disarmament Subcommittee negotiations in London. Similarly, during the Test Ban Talks,
which took place in Geneva from 1958 to 1960, State representatives urged the administration to support British and Soviet proposals calling for a treaty banning all nuclear explosions. In contrast, the military bureaucracies consistently blocked any accord which would limit the American nuclear weapons program. Throughout the negotiations in London and Geneva, the Pentagon and the Atomic Energy Commission fought a successful rearguard action against a test ban agreement.

As president, Eisenhower had the authority to shift the American policy in favour of an accord but he proved unwilling to do so. Reinforced by the American public and Congress, Eisenhower invariably supported the arguments presented by the defence bureaucracies. Distrustful of the Russians and worried that an agreement with the U.S.S.R. might lead to "our Munich," the president, like many of his military advisors, preferred the risks involved in proliferation and a nuclear arms race to those involved in a comprehensive test ban treaty.
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ABBREVIATIONS

AEC  Atomic Energy Commission
CIA  Central Intelligence Agency
DDEL  Dwight D. Eisenhower Library, Abilene
DOD  Department of Defence
FCDA  Federal Civil Defence Administration
JCS  Joint Chiefs of Staff
NA  National Archives, Washington
NATO  North Atlantic Treaty Organization
NSC  National Security Council
OCB  Operations Coordinating Board
ODM  Office of Defence Mobilization
PRO  Public Records Office, Kew
PSAC  President’s Science Advisory Committee
UN  United Nations
USIA  United States Information Agency
# TABLE OF CONTENTS

Abstract ................................................................. ii
Acknowledgements .................................................... iv
Abbreviations ............................................................ v
Introduction ............................................................... 1

**PART ONE: 1946-1954**

Chapter One:
The Role of Nuclear Weapons in American Defence Policy, 1946-54 ................. 12

Chapter Two:
International Implications of American Tests in the Pacific ............................ 27

Chapter Three:
Debating a Moratorium in the Administration .... 93

**PART TWO: 1955-57**

Chapter Four:
Managing Public Opinion ........................................... 130

Chapter Five:
Missed Opportunity .................................................. 165

Chapter Six:
New Tests in the Pacific Stimulate Protests at Home and Abroad ...................... 215

Chapter Seven:
Shifts in British and Soviet Policies ................. 242

Chapter Eight:
The Administration Embraces "Clean" Nuclear Weapons and Rejects Stassen .......... 280

**PART THREE: 1958-60**

Chapter Nine:
Moratoriums, Negotiations and Obstructions ..... 341

Chapter Ten:
Deadlock ............................................................. 415

Chapter Eleven:
Collapse .............................................................. 477

Conclusion .............................................................. 511

Bibliography ............................................................ 521
INTRODUCTION

This thesis focusses on the nuclear testing policies of the Eisenhower administration in the period 1953-60. Specifically, it analyses the positions taken and decisions made by the president, the secretary of state, and key bureaucracies: the Atomic Energy Commission (AEC), the Department of Defence (DOD), the State Department, the National Security Council (NSC), and the Central Intelligence Agency (CIA). In addition, this study examines the international implications of these policies, including the impact of American nuclear explosions on countries like Japan. It also analyses the influence of other nuclear powers, notably Great Britain and the Soviet Union, on the U.S. decision-making process.

Although this topic has been the focus of previous works, there has been relatively little examination of the policymaking process itself. Past works have approached the subject from a variety of other perspectives. Robert Divine's book, Blowing on the Wind: The Nuclear Test Ban Debate, 1954-60, concentrates largely on the public debate which took place during these years as a result of the fears caused by the radioactive fallout in the atmosphere produced by the tests. Since Divine wrote when most of the official documents were still classified, he relied largely on published sources and popular journals and newspapers. In his book, Divine offers a traditional interpretation of Eisenhower's presidential leadership, portraying the chief
executive as an indecisive leader who found it difficult to control his strong-willed subordinates. Despite the president's "lack of leadership" during the nuclear test ban negotiations, however, Divine believes that he sincerely wished to reach an agreement with the Soviet Union and Britain.¹ In a later volume, Eisenhower and the Cold War, Divine advances a "revisionist" interpretation of the president's direction of foreign affairs, depicting him as a much more activist leader, with greater control over the policy-making process in his administration. Based largely on secondary sources and Eisenhower's own statements, Divine concludes that the president actively promoted peace, his "area of greatest concern," and determinedly sought an agreement to end nuclear testing.²

Jane Dibblin's Day of Two Suns: U.S. Nuclear Testing and the Pacific Islanders deals with the experiences of the inhabitants of the Marshall Islands whose homes, health and livelihoods were affected by the U.S. nuclear testing program. Taking a similar approach in Justice Downwind: America's Testing Program in the 1950s, Howard Ball discusses efforts by "downwinders" to obtain compensation for the negative health effects caused by the American nuclear testing program in Nevada and Utah.³


³ Jane Dibblin, Day of Two Suns: U.S. Nuclear Testing and the Pacific Islanders (London, 1988); Howard Ball, Justice Downwind:
Atoms for Peace and War, co-authored by Jack Holl and Richard Hewlett, is an "official" history of the Atomic Energy Commission covering the years 1953-61 and is based on Department of Energy documents (many of which are not yet available to other scholars). Following the revisionist interpretation of Eisenhower, Holl and Hewlett depict him as a strong, energetic leader, able to control powerful subordinates such as the Secretary of State, John Foster Dulles, and the Chairman of the Atomic Energy Commission, Lewis Strauss. They maintain that the president was passionately interested in the cause of peace and promoted proposals for a world-wide test ban and an American moratorium on nuclear testing. Unfortunately, their examination of some topics relating to the Eisenhower administration's unfolding policy towards a test ban is incomplete, as they themselves acknowledge: "We have not always been able to present all the relevant facts, particularly on issues related to nuclear weapon technology, testing, and test-ban negotiations." In addition, their treatment of many important topics quite obviously favours the Atomic Energy Commission. For example, although they admit that the agency consistently opposed a nuclear test ban, they argue that the AEC, as the president's main source of scientific and technical information on nuclear issues, often provided information and opinions that "actually

America's Atomic Testing Program in the 1950s (New York, 1986).

facilitated test ban negotiations."

The most comprehensive historical study of arms control in this period is "Eisenhower and the Arms Race: A Balance of Risks, 1953-61," a 1987 dissertation by Charles Appleby. Like Hewlett and Holl, Appleby presents a positive account of Eisenhower's leadership and achievements. Drawing an analysis based on declassified official documents, he asserts that "contrary to traditional interpretations, arms control was pursued seriously prior to the Kennedy administration" and that "in many respects, Eisenhower's administration was a watershed for arms control." He concludes that "Eisenhower's personal commitment to initiate some form of arms control with the Soviets during this period was striking."6

Another group of historians have challenged Eisenhower revisionism. These "Eisenhower postrevisionists" suggest that the anticommmunist worldview shared by the president and his advisors not only undermined any prospects for a Soviet-American arms control agreement, but also contributed to the arms race.7 According to John Lewis Gaddis, Eisenhower prodded his administration to come up with constructive proposals in

5 Hewlett and Holl, Atoms for Peace and War, xxv, 296.


disarmament talks with the Russians, but the actual course of negotiations in the 1950s saw "an embarrassing series of American reversals that seemed to call into question the sincerity" of the proposals. In Gaddis' view, the Eisenhower administration accorded negotiations on arms control a lower priority than other components of its defence policy such as the "determination to score 'points' at the expense of the Russians in the arena of psychological warfare" and the desire to maintain a powerful nuclear deterrent.⁸ Reinforcing this perspective, David Rosenberg and Henry Brands point out that Eisenhower presided over the most massive buildup of nuclear weapons in American history during his two terms in office.⁹

My dissertation affirms the postrevisionist interpretation. By using nuclear testing policies as a case study, it argues that the Eisenhower administration did not seriously seek arms control in the 1950s. Despite flexibility shown by the Soviet Union and Great Britain, the United States failed to pursue a Comprehensive Test Ban Treaty. This failure was caused by a divided administration: while the State Department and other agencies advocated a significant shift in American nuclear testing policies, their position was not supported by either the


president or the most powerful bureaucracies advising him on this issue, the Atomic Energy Commission and the Department of Defense.

* * *

March 1, 1954 is a symbolic date for this study. On that day, twenty-three Japanese fishermen aboard the Fukuryu Maru\(^{10}\) were showered with radioactive ash from the first blast in the "Castle" series of nuclear tests conducted by the United States.\(^{11}\) In an attempt to manage foreign and domestic public opinion after this incident, the Eisenhower administration deliberately downplayed the health and environmental effects of its nuclear tests. Although these efforts helped to defuse the issue in the United States, international opinion grew increasingly critical of American policies. In the spring of 1954, Japan and India proposed a moratorium on all nuclear explosions. Within the administration, there was limited support for this proposal. Concerned about the reputation of the United States in the world, the State Department and several individual officials advocated a revision of the government's policies in

\(^{10}\) The unfortunate English translation of this name was the "Lucky Dragon".

\(^{11}\) This particular test had been preceded by approximately fifty-four other atomic and hydrogen tests carried out by the United States, the Soviet Union and Britain. The U.S. had conducted forty-two of these explosions. See Robert S. Norris and William Arkin, "Known Nuclear Tests Worldwide, 1945-1995," in Bulletin of Atomic Scientists 52 (May/June, 1996): 62. The actual number may be higher, since it is now known that the U.S. concealed many of its explosions during the period from 1946 to 1988. See, for example, William Broad, "117 Secret U.S. Atomic Tests are Indicated in Seismic Data," New York Times (January 17, 1988): 1, 24.
favour of a test ban. Their position rested on a number of premises: first, the United States would gain political advantages from such a ban; secondly, it would prevent the damaging health effects caused by radioactive fallout; thirdly, it would improve Soviet-American relations; and finally, it would slow down the arms race and deter further nuclear proliferation.

When the State Department and individuals in other agencies proposed a change in American policies on testing and disarmament, however, they met stiff opposition from the Atomic Energy Commission and the Defence Department. According to these defence bureaucracies, any agreement to limit testing was impossible because the Soviet Union could not be trusted. They argued that the health hazards caused by testing were grossly over-rated and minor compared to the threat posed by communist expansion. In their view, nuclear tests contributed to the American deterrent, thereby protecting the security of the United States and the rest of the "Free World".

The Atomic Energy Commission was perhaps the most vehement supporter of the U.S. testing program. This is not surprising since the very existence of the AEC and its laboratories depended largely on the testing and development of nuclear weapons. In 1946, the Atomic Energy Act had created the five member commission, giving it responsibility for all atomic energy facilities and programs, including testing.¹² The power of the

¹² The Atomic Energy Act of 1946 also created a special congressional committee, the Joint Committee on Atomic Energy, composed of nine senators and nine representatives, to ensure congressional oversight of the AEC. See Roger Anders, Forging the
Defense Department was also enhanced, and expanded, by the testing program.\textsuperscript{13} Even the Federal Civil Defense Administration (FCDA), set up in 1950 to protect civilians in the event of a nuclear war, was, paradoxically, in favour of more testing.

Many historians, such as Appleby, Hewlett and Holl, contend that the United States seriously pursued an agreement on testing during negotiations in London and Geneva during the 1950s. Despite the intransigence of the Soviet Union, they argue, the Eisenhower administration was committed to achieving a treaty banning tests. After all, Eisenhower did create a new position - that of the Special Assistant to the President for Disarmament - in 1955. Harold Stassen, who was appointed to this position, played a role in the United Nations Disarmament Subcommittee talks of 1955-57 which included discussions regarding a moratorium on testing. Similarly, the U.S. was represented by Ambassador James Wadsworth at Geneva during the extensive Test Ban Talks with the Soviet Union and Britain from 1958 to 1960. Nonetheless, this study will argue, based on thousands of recently declassified documents, that the administration never seriously pursued an accord to ban nuclear testing. Although the American representatives acted in good faith during negotiations (i.e., they seemed genuinely in favour of reaching

\textsuperscript{13} Although the development and production of nuclear weapons were the "complementary responsibilities" of the Atomic Energy Commission and the Department of Defence, they were the "primary functions" of the AEC. See JCS Memo, "Control of Atomic Secrets," 1958, JCSRG 218, 471.6, NA, Washington.

Atomic Shield: Excerpts from the Office Diary of Gordon E. Dean (Chapel Hill, 1987), 8-9, 263.
some form of agreement), their positions were consistently undermined by the rearguard actions of the military bureaucracies back in Washington.

The documents show that the other nuclear powers, the Soviet Union and Great Britain, were more interested in achieving a test ban treaty than was the United States, particularly during the years 1955-60. In Britain, there was considerable political and public pressure on the government to stop its testing program after the Fukuryu Maru incident. As elsewhere, people in the U.K. were concerned about radioactive fallout from the tests. Domestic opinion aside, the British government argued that a test ban agreement would help limit the proliferation of nuclear weapons to other countries, stabilize East-West relations, and provide a model for other negotiations in the disarmament field.

Soviet leaders were also worried about the prospect of proliferation. They supported a test ban treaty, not just for propaganda purposes, but also because they genuinely feared that the Federal Republic of Germany and China would both enter the nuclear arms race in the absence of an agreement to stop testing. In addition, the Russians were uninterested in a variety of new technologies promoted by the American defence bureaucracies, such as the so-called "defensive", "tactical", or "clean" weapons. According to Soviet thinking, strategic nuclear weapons were sufficient for deterrence. Finally, the Soviet Union wanted to spend more on its economy and less on its military force.

Economic strains, brought on by the need to satisfy demands for a higher standard of living in the Soviet Union and by the
deteriorating situation in the satellite countries, led the Kremlin to seek a test ban as a "first step" towards slowing down the arms race.

Despite the positions taken by the British and Soviet leaders in favour of a test ban, and the support for it in other countries, such as Japan and India, the Eisenhower administration never came close to negotiating a comprehensive test ban treaty. Supported by Congress and domestic public opinion, which opposed such an accord for most of the period under study, the government continued to assert that testing, and a greater number and variety of nuclear weapons, were necessary in order to counter the Soviet "threat" and to protect "national security". Throughout the 1950s, the Eisenhower administration contended that a strong nuclear posture was important to compensate for the "superior" manpower and conventional forces of the Soviet Union. The administration also suggested that the United States had to prepare itself for a "surprise atomic attack" that could come at any time from the U.S.S.R. The administration never made public those intelligence reports which concluded that the Soviet Union did not have the technology, the forces, the delivery capability or the inclination to carry out such an attack on the West. The arguments which emphasized the Soviet "threat" were convenient as justifications for both the continuation of testing and a large weapons buildup.

Given the growing power of the bureaucracies committed to testing, combined with other factors, such as the secret nature of the decision-making process and the enormous technological
momentum behind the nuclear testing programs, it is perhaps not surprising that the American government never seriously contemplated a comprehensive test ban accord. Nevertheless, if the president himself had been committed to such an agreement, or even believed that it was in the U.S. interest, he might have been able to overcome bureaucratic opposition. After all, Eisenhower did have to personally approve every series of nuclear tests that took place. However, the president shared the same ideological perspective as many of the leaders in the defence bureaucracies. Like many of his senior military advisors, he distrusted the Soviet Union. He also saw the world in Manichean terms, divided into opposites: good and evil, peaceful and militaristic, trustworthy and untrustworthy, democratic and totalitarian, capitalist and communist. This worldview did not envision any fundamental political accommodation with "the other". Throughout the 1950s, Eisenhower and the defence bureaucracies remained committed to protecting American "security" against the Soviet "threat" through a nuclear buildup, despite the profound effects this had on Soviet-American relations, on relations with the Western allies and other friendly countries, on the arms race, on nuclear proliferation, on the health of the people exposed to radioactive fallout, on the environment, and, indeed, on the democratic process itself.
PART ONE: 1946-1954

Chapter One

THE ROLE OF NUCLEAR WEAPONS IN AMERICAN DEFENCE POLICY. 1946-54

The Eisenhower administration was not the first to test nuclear weapons in the postwar period. The Truman administration had previously carried out extensive testing at the American proving grounds in both Nevada and the Pacific. In March 1946, the U.S. conducted its first postwar tests at the Bikini Atoll in the Marshall Islands. Before these tests began, some American commentators worried about the effect that they might have on the people living in the nearby Marshall Islands. Their calls to postpone or cancel the tests were ignored by the Truman administration, however. The president's decision to go ahead with the tests was reinforced by statements made by top military leaders such as the Secretary of the Navy, James Forrestal, and the U.S. Army Chief of Staff, General Dwight D. Eisenhower. Indeed, on the eve of the first explosion, these influential leaders went on nation-wide radio to emphasize the urgency of proceeding with the series. According to them, the tests in the Pacific were necessary for "national defence" and to "save

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1 For a discussion of the various series of tests conducted by the Atomic Energy Commission during the Truman administration see Roger Anders, Forging the Atomic Shield: Excerpts from the Office Diary of Gordon E. Dean (Chapel Hill, 1987), xxvi-xxix.
American lives."² At a time when the United States was beginning to develop a hard-line containment policy against the Soviet Union, these arguments helped convince the American public that nuclear weapons were important to national security.³ According to Paul Boyer, most Americans became convinced by late 1946 that it was imperative for the United States to pursue any measures, including nuclear tests, which would maintain American supremacy in atomic weapons. At the time, the independent journalist I.F. Stone observed that the tests carried out on Bikini made clear that the "atomic bomb is ... part of our future military strategy."⁴

In late 1946, the United States had only nine atomic bombs in its arsenal but two years later the number had risen to fifty.⁵ By 1948, nuclear weapons had begun to play an increasingly significant role in the American containment

² Paul Boyer, By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age (New York, 1985), 82-3.


⁴ Boyer, By the Bomb's Early Light, 334.

strategy. This role was expanded further as a result of international events such as the Berlin Crisis, the Communist victory in mainland China and the test of the first Soviet atomic bomb. Partly as a result of these developments, Truman ordered the Atomic Energy Commission to build the more powerful hydrogen weapon in late January 1950. As Roger Anders argues, the president's decision to develop the H-Bomb represented the "first overt step in an emerging nuclear arms race with the Soviet Union." When Truman approved the decision to build the thermonuclear weapon, he also asked the State Department to review American defence policy. In response, the State Department prepared a lengthy report for the National Security Council identified as NSC-68. Largely the work of the Director of Policy Planning, Paul Nitze, this document analysed Soviet-American relations in very alarmist and ideological terms. According to it, the Soviet Union, animated by the possession of nuclear weapons and a "new fanatical faith," was seeking to extend its "absolute authority over the rest of the world." Furthermore, the Kremlin viewed the United States as the only major threat to the achievement of its "fundamental design":


There is a basic conflict between the idea of freedom under a government of laws, and the idea of slavery under the grim oligarchy of the Kremlin which has come to a crisis with the ... exclusive possession of atomic weapons by the two protagonists ... [U]nwillingly our free society finds itself mortally challenged by the Soviet system. No other value system is so wholly irreconcilable with ours, so implacable in its purpose to destroy ours ..... 9

NSC-68 contained some important recommendations as well. Based on its prediction that the Soviet Union would possess the military capability of a surprise atomic attack against the United States within four to five years, the report proposed a vast and rapid buildup of American military might, including both nuclear and conventional weapons. 10

Not all members of the Truman administration shared this alarmist view of the Soviet Union. In May 1949, the Central Intelligence Agency had submitted a report which described Soviet intentions and capabilities in a very different manner. Acknowledging the increase in international tensions since 1948, this top secret document predicted that a deliberate Soviet military attack against the West was both "improbable" and "unlikely." In general, the CIA believed that Soviet military preparations were "precautionary" rather than aggressive. Based on the best intelligence estimates available, there was no evidence that the Russians were preparing any military action against the Americans. Indeed, the report concluded that the


U.S.S.R. was "likely to exercise some care to avoid an unintended outbreak of hostilities with the United States." Even after the Soviets developed the atomic bomb, Stalin's policies indicated, as David Holloway points out, that he "wanted to avoid war with the United States." 

When NSC-68 was being drafted, the American ambassador in Moscow, Charles E. Bohlen, stressed his reservations about its analysis of Soviet intentions. Bohlen objected to the contention that the fundamental design of the Soviet Union was world domination. In his view, the U.S.S.R. was a cautious nation with two goals. First, the Russian leaders wanted to maintain their power in the Soviet Union. Secondly, they hoped to extend their power throughout the world, but only to the degree that it was possible without serious risk to the internal regime.

Even members of the State Department who supported NSC-68 worried that it would be difficult to convince Congress and the public to accept the proposal since its recommendations were so costly and militaristic. Once the Korean War began in June 1950, however, it became very easy to sell the policy in the United States. One of Secretary of State Dean Acheson's aides later recalled that "We were sweating over it, and then -- with regard

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to NSC-68 -- thank God Korea came along." As a result of the war, the administration moved quickly to implement the recommendations outlined in the report, despite the enormous cost of NSC-68.

Because of its heavy emphasis on nuclear weapons, NSC-68 gave great impetus to the American testing program. On November 1, 1952, the United States exploded its first hydrogen bomb, code-named "Mike," at ground level on the Eniwetok atoll in the Pacific. This single test produced an explosive yield equivalent to ten megatons of TNT. One thousand times as powerful as the bomb dropped on Hiroshima, "Mike" created a huge nuclear fireball with a diameter of 3 1/2 miles and a mushroom cloud which soared to forty thousand feet. According to an official document, the explosion resulted in "complete annihilation" within a radius of three miles, causing the entire island of Elugelab to "disappear."

After this test, the American administration was very careful about the type of information that it released regarding the blast. The government developed two methods to handle public fears about the radiation hazards associated with nuclear tests.

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15 The final congressional defence authorization for fiscal year 1951 was $48.2 billion which represented an increase of 257 percent over the original 13.5 billion requested by the Truman administration. See Gaddis, Strategies of Containment, 111.

16 Holloway, Stalin and the Bomb, 303.

17 Background Memo for all Media on Operation Ivy, April 1954, OCB Central Files Series, WHO,NSC Staff: Papers, DDEL, Abilene.
First, Washington kept most information about the American weapons program secret. Secondly, it played down the dangers and impact of the tests and tried to discredit any who warned of such dangers. When "Operation Ivy," a film recording the Mike test, was finally shown to some reporters in Washington, it was so sanitized that it had little emotional impact on them and they pronounced it "flat" and "tame." According to the Christian Science Monitor, most Washington newspapermen who saw the film came away with a "virtually unanimous verdict that it was a rather poor job of informing people" about thermonuclear tests.

Prior to the testing of "Mike," a State Department Panel of Consultants asked for a postponement of the explosion, on the grounds that the Soviet Union might agree to a ban on thermonuclear weapons. At the time, the Truman administration never seriously considered this request. As David Holloway points out, even if the Americans had considered a postponement, it was highly unlikely that Stalin would have reciprocated American restraint and agreed not to develop the Soviet hydrogen weapon. In his view, signs of "a new attitude to nuclear weapons" only began to emerge in the U.S.S.R. after Stalin's death in March 1953 and the first Russian test of a thermonuclear weapon in August of the same year.

When Eisenhower came to power in January 1953, the testing

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18 Boyer, By the Bomb's Early Light, 304.
19 Memo, April 9, 1954, OCB Central Files Series, WHO, NSC Staff: Papers, DDEL, Abilene.
20 Holloway, Stalin and the Bomb, 319.
of nuclear weapons had already begun to play an important role in American defence policy. According to David Rosenberg, Eisenhower entered the White House with a "more thorough knowledge of nuclear weapons than any president before or since."

As Army Chief of Staff in 1946, he had jurisdiction over the Manhattan Engineering District. In 1947, Eisenhower was the chief advocate of the first Joint Chiefs of Staff nuclear war plan and two years later, while acting as temporary chairman of the Joint Chiefs of Staff (JCS), he championed the expansion of the nuclear weapons program. As the first Supreme Allied Commander of the North Atlantic Treaty Organization (NATO) in 1950-52, he supported policies advocating the use of tactical nuclear weapons to defend Europe. In January 1952, the JCS authorized Eisenhower to begin planning for the use of atomic bombs by Navy tactical air units and by Air Force units which were to be stationed in Europe.

During his first years as president, there was some continuity between Eisenhower's administration and the previous one: he was committed to the strategy of containment, the development of thermonuclear weapons, and the testing program established under Truman. However, there was also some discontinuity. In June 1953, Eisenhower reversed Truman's

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22 Ibid.
23 In 1952, the United States began to deploy tactical nuclear weapons in Western Europe. The weapons were designed to be delivered by aircraft, missiles or artillery. See Holloway, Stalin and the Bomb, 325.
longstanding policy of maintaining almost complete civilian control of the atomic stockpile and took steps to place nuclear bombs directly in the hands of the military. In an effort to distance himself from the Democrats and practice budgetary restraint, Eisenhower also introduced the "New Look" defence policy. This new strategy included a number of elements such as a general reduction of defence expenditures, planning on a long-term basis, fewer conventional forces and reliance upon the allies for initial ground defence in the event of war. As Robert Wampler argues, however, it was the policy's "increased emphasis on strategic airpower and nuclear weapons which both caught the public eye and was of most importance for the future direction of NATO strategy."25

Throughout 1953, the NSC, JCS and the rest of the Eisenhower administration gave extensive consideration to the role nuclear weapons should play in U.S. military strategy, as well as in NATO planning.26 While this review was under way, Eisenhower informed the NSC that if national security was at stake, he would

24 Robert W. Malcolmson, Beyond Nuclear Thinking (Kingston, 1990), 9. On June 20, 1953, Eisenhower transferred a sizable number of complete atomic weapons to the military for deployment to specified bases afloat and ashore. By 1961, less than 10% of the nuclear stockpile remained under civilian control. See Rosenberg, "Origins of Overkill," 141.


"certainly decide to use them."\textsuperscript{27} On October 30, the president approved NSC 162/2, a top secret document which outlined the "New Look" policy and clearly stated the prominent role that nuclear weapons would play in American strategic planning:

Within the free world, only the United States can provide and maintain ... the atomic capability to counterbalance Soviet atomic power. Thus, sufficient atomic weapons and effective means of delivery are indispensible for U.S. security ... In the event of hostilities, the United States will consider nuclear weapons to be available for use as other munitions.\textsuperscript{28}

From the perspective of the administration, the U.S. nuclear capability would act as a deterrent to Soviet aggression in Western Europe. But, in order to make this policy successful, it was imperative that the NATO allies not only accept the central role that atomic weapons played in the containment strategy, but also agree to the use of their territory as bases for the launching of the U.S. strategic counter-offensive.\textsuperscript{29} By early 1954, both the president and the secretary of state recognized that they needed to convince the allies to adopt this policy. In a speech to the Council on Foreign Relations in New York on January 12, Secretary of State Dulles described the strategy which later came to be known as "massive retaliation":

\begin{quote}
We need allies and collective security. Our purpose is to make these relations more effective, less costly. This can be done by placing more reliance on deterrent
\end{quote}


\textsuperscript{28} Wampler, "Ambiguous Legacy," 519.

\textsuperscript{29} Wampler, "Ambiguous Legacy," 520.
power and less dependence on local defensive power ...
Local defense will always be important ... [but] must be reinforced by the further deterrent of massive retaliatory power ... The way to deter aggression is for the free community to be willing and able to respond vigorously at places and with means of its own choosing. 30

In order to make this strategy credible, the Eisenhower administration decided that a greater number and variety of nuclear weapons had to be tested and developed. The first series carried out under the new administration had taken place in Nevada from March to June 1953. This set of tests, called "Upshot-Knothole," produced more fallout than any of its predecessors. After the first explosion, fallout contributed to an abnormally high number of sheep deaths in local herds in Utah. The seventh test sent so much radioactivity out across local highways that the Atomic Energy Commission, the agency responsible for the series, had to stop traffic so that it could wash off contaminated vehicles. The ninth shot produced a fallout cloud that not only caused more car washing but also forced the residents of St. George, Utah to stay indoors for three hours. 31 The cloud drifted northward, hovering over the Cache Valley on the Idaho-Utah border, one of the most productive dairy regions in the West, killing cows within hours. Reports also reached the government that a relatively large amount of fallout from this test later descended on Troy, New York.

30 Quoted in Bundy, Danger and Survival, 256.

31 Thirty years later, this series figured prominently in lawsuits alleging that the fallout had caused a disproportionately high number of cases of cancer and leukemia among the local residents. See Anders, Forging the Atomic Shield, 32-33, 239.
Students at the Rensselaer Polytechnic Institute in Troy noticed that the laboratory geiger counters were clicking when they came to class. They discovered that the radioactivity level of the tap water was 2,630 times higher than normal.\textsuperscript{32}

As alarming reports like this multiplied, worries about the effects of radiation began to spread in the United States. Consequently, the Eisenhower administration developed a number of public relations strategies designed to ease public fears about the effects of nuclear explosions. One tactic, which Eisenhower himself encouraged in 1953, was to keep the public "confused" about the radiation hazards associated with nuclear tests.\textsuperscript{33} At the same time, the president supported "Operation Candor," a policy aimed to educate Americans (and other nations) about the Soviet "threat" in order to help them understand the need for a strong nuclear deterrent.\textsuperscript{34} In addition, Eisenhower participated in a psychological warfare strategy designed to make it appear that the U.S. was interested in pursuing arms control.

One of the first propaganda efforts along these lines was the president's "Atoms for Peace" speech, delivered at the UN General Assembly on December 8, 1953. Eisenhower informed the world in this address that American atomic weapons were now twenty-five times more powerful than the original bombs used against Japan, "while hydrogen weapons were in the ranges of


\textsuperscript{33} Boyer, \textit{By the Bomb's Early Light}, 188.

\textsuperscript{34} Hewlett and Holl, \textit{Atoms for Peace and War}, 43.
millions of tons of TNT equivalent." Atomic weapons, he stated, had achieved "virtually conventional status" within the U.S. armed services. Nevertheless, since an arms race was dangerous, he proposed that the U.S., the U.K. and the U.S.S.R. make small joint contributions from their stockpiles of fissionable materials to an International Atomic Energy Agency under the aegis of the UN. The advantage of such a plan, Eisenhower reasoned, was that it would not require "a completely acceptable system of worldwide inspection and control."35

Appleby believes that the "Atoms for Peace" initiative was "a serious proposal that Eisenhower hoped would lead eventually to substantive arms control measures."36 Similarly, Ambrose argues that the plan was the "best chance mankind has had in the nuclear age to slow and direct the arms race."37 In contrast, the postrevisionists do not believe that the Eisenhower administration ever intended "Atoms for Peace" as a serious arms control offer. In their view, the administration's anti-communism undermined any prospects for a Soviet-American accord at this time. According to Raymond Garthoff, the president's speech was actually an act of "political warfare."38 As Appleby points out, this proposal was crafted by C.D. Jackson, the presidential assistant responsible for formulating and overseeing

35 Ambrose, Eisenhower: The President, 147-149.


38 Quoted in Rabe, "Eisenhower Revisionism," 110.
the implementation of the American psychological warfare strategy, an important component of the containment policy. Eisenhower himself acknowledged the one-sided nature of the proposal prior to the speech. According to Ambrose, the president had noted in his private diary that "Atoms for Peace" would benefit the U.S. much more than the U.S.S.R. since any reduction in the Soviet stockpile of fissionable material would widen the American lead in nuclear weapons development. In addition, the president presented the proposal at the UNGA publicly, without any prior consultations or discussions with the Soviet Union, thereby reducing the possibility of any serious negotiations. Therefore, it is difficult to avoid the conclusion that this speech was a propaganda gambit, designed to deflect attention away from the American nuclear arms buildup. The "Atoms for Peace" speech was received well in the U.S. and abroad, but the Soviet leaders rejected it on the grounds that it would have no impact on the arms race.

Of course, the military bureaucracies in the U.S. supported

39 Appleby, "Eisenhower and Arms Control," 70. According to Gaddis, the non-nuclear components of the "New Look" containment strategy included psychological warfare, covert operations, and the strengthening of alliances like NATO. See Gaddis, Strategies of Containment, 152.

40 Ambrose, Eisenhower: The President, 149.

41 Telegram from the American Embassy in Moscow to the Secretary of State, September 22, 1954, International Series, AWF, Folder: USSR, DDEL, Abilene. In its counter-proposal, the Soviet Union suggested an agreement whereby the nuclear powers would make a commitment to never use nuclear weapons. This was unacceptable to the United States since the threat to use nuclear weapons was a key element in the foreign policy of the Eisenhower administration. See Holloway, Stalin and the Bomb, 345.
the proposal precisely for this reason: the AEC and DOD knew that it would not have any impact at all on the American nuclear weapons buildup. Indeed, as McGeorge Bundy suggests, the effect of the president's speech on the arms race was "either zero or negative." It was in fact negative because the hopeful rhetoric in the speech misled the public. "Atoms for Peace" lulled the American people into believing that the government was doing something to bring the arms race under control whereas in reality, Washington's top priority remained the testing and development of more nuclear bombs. As the Eisenhower administration reassured the public with rhetoric about "peaceful atoms," the arms race proceeded unchecked.

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42 Bundy, *Danger and Survival*, 288.
Chapter Two

THE INTERNATIONAL IMPLICATIONS OF AMERICAN TESTS IN THE PACIFIC

In early January 1954, the Atomic Energy Commission began planning for the "Castle" series of thermonuclear tests in the Pacific. President Eisenhower authorized seven explosions scheduled to begin at the Pacific Proving Grounds on March 1 and to continue until the third week of April. Although the United States tried to keep these tests secret, international protest against the American program began shortly after it was discovered that the first explosion, code-named "Bravo," had resulted in the direct injury of twenty-three Japanese fishermen and hundreds of Marshallese. This incident caused a deterioration in Japanese-American relations; it also led to tensions with NATO countries, such as Great Britain, Canada and France, and neutral nations like India.

As the Atomic Energy Commission was preparing for the "Castle" series, a Japanese fishing boat, the Fukuryu Maru No.5, left the port of Yaizu, Shizuoka Prefecture on January 22, and headed south-east. On board the 99.9 ton vessel were twenty-two crewmen, under the leadership of skipper Hisakichi Tsutsumi. On January 27, the boat shifted its direction eastward, holding this course for the next few weeks as it carried on its fishing activities. On February 23, the vessel changed its course and

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headed westward to fish in the neighbourhood of the Marshall Islands. On March 1, at approximately 1:15 a.m., it arrived at the position of latitude 12° 03′ N and longitude 166° 56′ E, and the crew started to set the lines. Afterward, the boat cruised for ten minutes towards the north-east and drifted for about twenty minutes with its engine stopped. About three hours later, at 4:12 a.m., the crew observed a reddish brilliant light to the west-south-west of the vessel. The colour of this bright light gradually turned to white-yellow and back again to red and then faded away. No wind was felt within the next seven to eight minutes, but two blasts were heard in succession. A mushroom-shaped cloud appeared in the direction where the light was first observed and this cloud started to expand, covering the sky with darkness.

On first seeing the light, some of the crew realized that it might be an atomic test, and they began hauling in the lines. All hands, with only a few exceptions, worked on the upper deck and in the wheel house. About three hours later, in the midst of the hauling operation, dust resembling white ash began to fall on the deck where the crew was working. The hauling operation ended about 10:30 a.m. and the vessel headed north, attempting to escape the still falling dust. The crew processed the catch (mostly tuna) on the upper deck. The white ash continued to descend until noon, by which time the decks were so covered that the fishermen made "visible footprints" in it.

Heading north-west, the fishermen washed the decks in order to remove the white material. However, in the following two to
three days, the whole crew began to feel ill, suffering from headaches and nausea. Seven to eight days later, they began to feel painful irritations, from burns in the places exposed to the ashes -- the neck, the face, the ears and the area near where they wore the "hachi maki" (a cotton towel wrapped around the head). On March 14, the crew arrived back at their home port of Yaizu.²

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The American government tried to minimize the publicity concerning the "Castle" series by keeping much of the information about it secret. On the day of the first explosion, the Atomic Energy Commission issued a terse statement indicating that Joint Force Task Seven had detonated an atomic "device" in the Marshall Islands. No details were given about the size or impact of the explosion. Although the AEC had planned to make no further comment, it was forced to respond when a letter from a serviceman with Task Force Seven appeared in a Cincinnati newspaper on March 11. In its brief, five sentence statement, the agency admitted that twenty-eight American servicemen and 236 Marshall Islanders had been exposed to radiation during a "routine" atomic test. There was nothing to worry about, however, since, according to

² All dates are in Japanese Standard Time. This description of events is based on an investigation by the Japanese Government. See the "Interim Report on the Fukuryu Maru No. 5 Accident," March 17, 1954; and the "Aide Memoire," undated, DSRG 59, 711.5611/4-3054, NA. Similar information appears in an undated memo (written "prior to" April 9, 1954) from Merrill Eisenbud, Director of the Health and Safety Lab of the Atomic Energy Commission, to the State Department, DSRG 59, 711.5611/4-3054, NA, Washington.
the AEC, "all [were] reported well ... there were no burns."3

News regarding the Fukuryu Maru did not reach the United States (or the rest of the world, for that matter) until March 15 when it appeared in the Japanese press. Once the government in Washington became aware of the incident, there was almost daily telegraphic communication between the Department of State and the American ambassador in Japan, John M. Allison. Since the onset of the Cold War, the United States had viewed a close relationship with Japan as an important component of its containment strategy against the Soviet Union. However, as Roger Dingman points out, Washington's handling of the Fukuryu Maru incident contributed to the "most serious strain on Japanese-American relations since 1945."4 Early correspondence regarding the incident made it clear that the two countries had very different priorities. The immediate concerns of the Japanese government as conveyed to Allison were the health of the victims, financial compensation, and the effect of testing on the fishing industry. In contrast, the immediate worries of the American government focussed on other issues, such as unfavourable publicity, national security implications and the possible shipment of contaminated fish to the U.S.

On March 18, 1954, Allison informed John Foster Dulles that


although the Fukuryu Maru had arrived in Japan with "contaminated fish," he was "reasonably certain" that none of this catch had entered export channels, either as canned or frozen tuna. While other boats had also passed through the affected area, it was hoped that these catches were not contaminated, the hulls of the boats having been been found only "slightly radioactive". Allison urged the State Department to "minimize publicity" of this information in the United States.\(^5\)

The AEC tried to minimize the damage from the incident by rushing two American experts to Tokyo. The AEC sent Dr. John B. Morton, director of the Atomic Bomb Casualty Commission in Hiroshima, and H. Merrill Eisenbud, director of the AEC's Health and Safety Laboratory. On March 20, the Japanese government allowed these Americans to visit the fishermen who had been taken to Yaizu Hospital. Because of the seriousness of their injuries, the experts recommended that two of the patients be removed to Tokyo University Hospital. They also inspected the Fukuryu Maru, concluding that the crew had received a minimum dosage of radiation of between fifty and seventy-five roentgens.\(^6\) Since the maximum permissible exposure of radiation for AEC personnel in 1954 was 3.9 roentgens,\(^7\) it is not surprising that the


\(^6\) A roentgen is equal to the radiation emitted by one gram of radium at a distance of one foot. See Richard L. Miller, Under the Cloud: The Decades of Nuclear Testing (New York, 1986), 399.

\(^7\) See Richard Hewlett and Jack Holl, Atoms for Peace and War, 1953-61 (Berkeley, 1989), 174.
experts conveyed their "serious" concern about the fishermen's injuries to the State Department.8

In another telegram, Eisenbud indicated that the fishermen on the Fukuryu Maru might have received an even higher dosage of radiation than he originally estimated. He admitted that it was difficult to determine the actual dosage because the original estimate (fifty to seventy-five roentgens) had been based on the residual debris still on the ship when the first measurements were made. As he pointed out, the "actual dose could have been two, ten or even one hundred times higher, depending on how much ash had been washed off the ship and at what time."9

On the evening of March 20, a meeting took place in the American embassy in Tokyo which included representatives from the Japanese government worried about the implications of testing for the fishing industry. Also present were representatives from the American and Japanese fishing industries. The American officials expressed their concerns about the effects of the Fukuryu Maru


9 Telegram from the American Embassy in Tokyo to the Department of State, including the memo from Merril Eisenbud, (written "prior to" 9 April 1954), DSRG 59, 711.5611/4-3054, NA, Washington. The British Embassy also believed that the condition of the fishermen might be more serious than originally thought. According to it, the fishermen being treated in the Tokyo Hospital were "showing symptoms different from the burns suffered by people in Hiroshima and Nagasaki. The fact that they had eaten the radioactive fish and smoked cigarettes on which radioactive ash had fallen seemed to have introduced radioactivity into their lungs, their digestive organs and the marrow of their bones." See Telegram from A.S. Halford, Counsellor, British Embassy in Tokyo, to Colin Crowe, Far Eastern Department, Foreign Office, April 7, 1954, FO371/110695, PRO, Kew.
incident on the importation of fish from Japan by U.S. companies. Recognizing the threat posed to the U.S. market by the incident, the Japanese representatives asked the Americans to assist in the inspection process at the ports of Yokohoma and Shimizu. The Japanese officials gave assurances that no fish showing any signs of radioactivity would be shipped to the U.S.

In informing the State Department about this meeting, Allison also offered some advice about publicity. The U.S. Food and Drug Administration was under instructions to inspect all shipments entering American ports from Japan. In the ambassador's view, it would be a good idea to publicize the results if these inspections revealed no evidence of contamination. Indeed, the U.S. Information Agency (USIA) should be "instructed to play back these stories for exploitation here" in Japan.¹⁰ Preoccupied with the security ramifications of the Fukuryu Maru case, Allison also expressed his view that:

technical information of a highly sensitive nature could have been obtained from the Fukuryu Maru ... Japanese officials and technicians had full access to the vessel for six days before American officials had an opportunity to visit the vessel (March 14-20). There is no reason to minimize the importance of the information that may have been ascertained or its potential to hostile powers. The disclosures now being published by the Japanese press by Japanese scientists might easily result in bringing materially closer to Japan the horrors of a thermonuclear attack by the Soviet Union ....¹¹

¹⁰ Telegram from the American Embassy in Tokyo to the State Department, March 21, 1954, DSRG 59, 711.5611/3-2154, NA, Washington.

A day later, in a meeting with Okazaki Katsuo, the Japanese Minister of Foreign Affairs, Allison referred to the "serious security problem" and requested that Japanese leaders "take all steps necessary to restrict access to information obtained from the ashes and the ship to people in whom the Japanese government had complete confidence." Okazaki replied that, while it would be possible to call in the top Japanese press people, it would be more difficult to control the activities of doctors and scientists who had already had access to the ship's ashes and to the victims. He also outlined the difficulties which had arisen in the Japanese Diet as a result of the Fukuryu Maru incident. Opposition parties had been asking questions regarding the tenet in international law which allowed the American government to cordon off and use large areas of the Pacific for its own nuclear weapons tests. While the Minister had attempted to defend the American position, explaining that the U.S. was complying with the trusteeship agreement over former mandated islands, he did not think that this explanation would long prove satisfactory, particularly in view of the fact that the American government had informed the Japanese (on March 18) that it intended to enlarge the test area as a result of the Fukuryu Maru incident. Even

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12 Although there is no known record that the U.S. Government itself responded to this question directly in 1954, the British Prime Minister, Winston Churchill, made a statement in the House of Commons, explaining that "International rules have been prescribed to regulate the testing of conventional weapons; and these, appropriately amended to meet the greatly increased risks of experiments with atomic weapons, have been meticulously applied in all the experiments carried out by the U.S. authorities." See Draft Statement, March 1954, F0371/110695, PRO, Kew.
more serious, however, were the questions which socialists had raised, including "what assurance could be given to the Japanese people that fish from the area involved or from the outside area where the ashes may have fallen were not contaminated?" In Okazaki's view, questions like this, which he himself thought reasonable, would only increase in intensity since the Japanese fishermen depended so much on this section of the Pacific for their livelihoods. Consequently, the minister told Allison in confidence that he might have no choice but to approach the American Embassy with an official statement indicating that "until authoritative satisfactory answers could be given, the Japanese government would have to request that the U.S. postpone any future tests."

Allison reported that throughout this conversation, Okazaki acted "friendly and reasonable" but was obviously very concerned about the possibility of a greater deterioration in Japanese-American relations in the absence of early steps to calm his people's fears and anxieties. Okazaki had pointed out that an indication from the American government that it would at least be responsible financially for the medical care and lost wages of the affected fishermen might have great favourable effect in Japan. Accordingly, Allison advised the secretary of state to take "prompt action" along the lines suggested by the Japanese Foreign Minister.¹³ Dulles thereupon informed the Japanese Foreign Minister through Allison that pending the conclusion of

its investigation of the **Fukuryu Maru** incident, the American government was prepared, as an interim measure, to reimburse the Japanese government for its financial assistance to the fishermen for medical care and lost wages. Dulles also advised Allison to publicize an AEC statement announcing the expansion of the restricted danger area in the Pacific and continuous patrols during test periods to keep out all unwanted vessels. In addition, the secretary of state recommended that the ambassador convey to Okazaki the opinion of the AEC that there was only "a negligible hazard, if any, in eating the fish caught in the Pacific Ocean outside the immediate test areas subsequent to tests." Since there might be "some danger" in the consumption of fish caught in the immediate test area shortly after the tests, the AEC recommended that the Japanese continue to monitor the radioactivity levels of fish caught in these areas.\(^{14}\)

On the same day that he received these instructions, Allison reported to Washington that official Japanese cooperation continued to decline.\(^{15}\) In addition, the Japanese press was publishing "emotional" and "sensational" stories blaming the U.S. for the incident. One story alleged that the American government wished to obtain the **Fukuryu Maru** so that it could "destroy the evidence" and another argued that the U.S. was interested in the ill fishermen "only as guinea pigs." Still other reports argued

\(^{14}\) Telegram from the Secretary of State to the American Embassy in Tokyo, March 23, 1954, DSRG 59, 711.5611/3-2254, NA, Washington.

\(^{15}\) Telegram from the American Embassy in Tokyo to the Secretary of State, March 23, 1954, DSRG 59, 711.5611/3-2354, NA, Washington.
that there were additional cases of radioactive illness throughout the nation, that new cargoes of radioactive fish were found on boats arriving from the Pacific, and that contaminated ocean currents were flowing from the testing areas to the shores of Japan. Many reputable Japanese scientists supported the reports. One scientist at Tokyo University, predicting that two of the fishermen would die from radiation sickness, despite the American assurances to the contrary, described Japan as a "victimized country" and the U.S. as an "irresponsible" nation. In the ambassador's view, the growing anti-American attitude in Japan was attributable to the Japanese government's inability to control its scientists and doctors and prevent them from speaking to the press. Allison also called attention to the "peculiar psychology" of the Japanese scientists, which combined feelings of "nationalism, neutralism, utopianism, softness toward communism, and, for many of them, bitter resentment over their treatment under occupation."¹⁶

The Japanese people became even more indignant when they learned that officials within the United States were suggesting that the *Fukuryu Maru* had been involved in an espionage mission. Representative W. Sterling Cole, a Republican from New York and the Chairman of the Congressional Joint Committee on Atomic Energy, stated publicly that because the vessel might have been

¹⁶ Ibid. Like Allison, Harry Pfeiffer, the American Consul in Hokkaido, reported on the growing health concerns of the people in his prefecture. Scientists at Hokkaido University had discovered many cases of "suibaka maguro" (radioactive tuna). See Telegram from Pfeiffer to the State Department, March 24, 1954, DSRG 59, 711.5611/3-2454, NA, Washington.
engaged in spying, the U.S. would make no commitment to pay compensation until a full investigation had been carried out.\footnote{17} Cole's statement was widely criticized in Japan. The people of Hokkaido, for example, found his allegations to be both "preposterous and insulting."\footnote{18}

Japanese indignation regarding these American accusations of spying was justified. Some officials in the American government did suspect that espionage was involved in the Fukuryu Maru incident and they conveyed their suspicions to the Japanese government. On March 24, Allison warned the Ministry of Foreign Affairs that Japan needed to handle the incident in a more responsible manner "lest our future cooperation be jeopardized." Recommending that the Japanese government agree to the decontamination of the fishing boat by the U.S. Navy and that American technicians receive full access to the ill crewmen, Allison made it clear that any investigation of the incident "must include searching questions related to the presence of the Fukuryu Maru in the vicinity of the testing area." The U.S. expected prompt answers from the Japanese government to any questions posed by the American embassy regarding the incident.\footnote{19}

On March 25, the embassy presented a long, detailed, not very subtle, list of questions to the Ministry of Foreign Affairs.

\footnote{17} Telegram from Ralph Blake, Consul in Kobe, to the Department of State, April 1, 1954, DSRG 59, 711.5611/3-2454, NA, Washington.

\footnote{18} Telegram from Pfeiffer to State Department, March 24, 1954, DSRG 59, 711.5611/3-2454, NA, Washington.

\footnote{19} Telegram from Allison to the State Department, March 24, 1954, DSRG 59, 711.5611/3-2454, NA, Washington.
Did the Fukuryu Maru normally operate by itself away from all other vessels? What was known about the personal backgrounds and political activity of the crew? Was there anything unusual in their educational background, military service, police records? What instructions were given to the master prior to his departure? Other than the Yaizu Hospital staffs, who had access to the patients? What kind of de-briefing took place? How soon did Japanese Communist Party activity in Yaizu begin? Was it organized by outsiders or by villagers? Was there any known relation between any of the Yaizu communist demonstrators and members of the crew or their relatives? Were there any suspicious monitorings of communist clandestine radio stations since the Fukuryu Maru sailed from Yaizu which might bear on the incident?\(^\text{20}\)

Despite the offensive implications and tone of this memo, the Minister of Foreign Affairs replied to the questions promptly. Representing the Ministry, Harumi Takeuchi explained that the Fukuryu Maru was operating alone because this was the custom for a vessel of this type. It was also common for a boat like this to keep its fishing position secret from other boats until after the fishing operation was complete. The skipper and his crew were full-time members of the boat, although all were not from Yaizu. The Yaizu Municipal Police did not uncover any unusual information regarding their careers, travels, education or political activities. In fact, there was no sign of any

personal connection between communists and crew members and their families. Rather, the families of the crew members had made "no complaint" and were "grateful" for the relief activities of the Shizuoka Prefectural government. It was even reported that an offer to launch a relief fund collection from communist sources was rejected by the families.21

In addition, the Japanese government gave the American embassy an Aide Memoire which provided further information about the incident. The "Miscellaneous" section of this report concluded that there was no evidence that the Fukuryu Maru (or any other vessel) received warnings, by radio message or any other means, while in the area before the incident occurred. The log was found to have been duly and properly entered. The condition of the radio equipment was good. However, the vessel's Radio Operator had only a slight knowledge of English.22 This fact explained why the fishermen said that they received no warnings about the hydrogen test on March 1. As was customary, the Atomic Energy Commission sent its warning messages in English and the Japanese radio operator on the Fukuryu Maru (as was probably the case on most Japanese vessels) simply did not understand the message.

Despite the fact that this oversight was the AEC's responsibility, and despite the cooperation and information


provided by the Japanese government on this very sensitive issue, the American embassy was not satisfied with the answers that it received. Indeed, in a later letter to Takeuchi, it again stressed the importance of determining promptly whether "unfriendly and clandestine elements had intervened in the affair with an intention of attacking the good relations between Japan and the U.S." The embassy demanded further evidence from the Japanese such as authenticated copies of the log and all wireless messages sent or received by the *Fukuryu Maru* during its last voyage.\(^\text{23}\)

The Japanese press was thus accurate when it emphasized the American government’s preoccupation with the security implications of the *Fukuryu Maru* incident. It was also right when it criticized certain bureaucracies in the U.S. for having research interests in the fishermen’s conditions. On March 26, K.D. Nichols, the General Manager of the Atomic Energy Commission, sent a letter to the secretary of state, emphasizing the AEC’s own "important research interest in the possible effects of our recent tests on the crew of the *Fukuryu Maru* and the health hazards associated with the debris which fell on the vessel." Recognizing that the cooperation of the Japanese government was indispensable to their "obtaining clinical and other technical information regarding the persons apparently affected," the AEC felt that this cooperation might be more readily achieved if the State Department made an immediate

payment to the Japanese government. Accordingly, the Commission had decided to transfer $25,000 of its funds to the State Department in order to achieve the full cooperation of the Japanese government. Through this payment the AEC hoped to gain information which would be "exceedingly valuable to its program."24

In a message to the secretary of state, Allison made a similar, but even more pointed, argument that more complete access to the fishermen might prove "irreducible" to American security interests. In his view, the "data possibly derivable from these patients and available nowhere else might have the highest importance for U.S. science, security and planning." Indeed, the Japanese should understand that the extent to which the American government would "accept liability for this accident would depend directly on the extent to which, in its judgement, the best medical techniques had been applied." The Japanese government could prove its "friendly attitude" towards the U.S. by granting American medical scientists full and free access to the injured fishermen.25

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Back in the United States, panic spread when newspapers gave front-page coverage to the effects of testing on the fishing industry in Japan. Americans began sending letters, telegrams,


and post cards to the government protesting against nuclear tests. Sterling Cole announced plans for a Congressional investigation of "Bravo" by the Joint Committee on Atomic Energy. Secretary Dulles, who had been preoccupied with the Dien Bien Phu crisis in Indochina, also believed that the AEC's secrecy regarding the effects of the Fukuryu Maru incident should now end. As a result of this pressure, the Commission admitted in a released statement that the level of radiation in the air over the U.S. had increased since the March 1 shot, but it reassured Americans that the level was still far below what could be harmful "in any way, to human beings, animals or crops." During the last week of March, Lewis Strauss visited the Pacific Proving Grounds where he witnessed the second test of the "Castle" series. From Eniwetok, Strauss sent a message to Press Secretary James Hagerty conveying his opinion that claims about the injuries to the Japanese fishermen were "unverified." Following a meeting with Strauss after his return, Eisenhower and Hagerty decided that the best way to reassure the American people -- to "ease their fears" -- would be to have the AEC Chairman make a prepared public statement.

29 The second test took place on March 26.
The president very much liked and respected Lewis Strauss. Combining a background in both business and the military, Strauss had first been appointed to a five-year term on the Atomic Energy Commission in 1946. An aggressive anti-Communist, he had insisted that the agency develop a long-range system to detect nuclear explosions, and it was this system that discovered the first Soviet test in 1949. During that same year, Strauss had also been one of the strongest advocates of the development of the hydrogen bomb. In his letter to Truman advocating the development of the "Super," Strauss warned the president that "a government of atheists is not likely to be dissuaded from producing the weapon on 'moral' grounds." After a brief stint as a banker in the early 1950s, he returned to government service when Eisenhower made him Chairman of the AEC in 1953. Even though Strauss had no scientific background, Eisenhower gave him the additional title of Special Adviser to the President on Atomic Energy. As Robert Divine points out: "This dual position

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32 As Divine describes it: "By the time he [Strauss] was 20, he had become Herbert Hoover's assistant in the WWI Food Relief Administration, accompanying his chief to the Paris Peace Conference. There he met investment banker Mortimer Schiff of Kuhn, Loeb and Company, who offered him a job. He married the daughter of a senior partner in Kuhn, Loeb, in 1923 and five years later, at the age of 33, he had become a full partner himself. He had been a member of the naval reserve since 1925, and during the defense emergency in 1941 he entered active service as Lieutenant Commander. He quickly caught the eye of James Forrestal, the future Secretary of the Navy, worked as his special assistant throughout the war, and left the Navy in 1945 with the rank of Rear Admiral, a title that he treasured even more than his reputation as a successful Wall street banker." See Divine, Blowing on the Wind, 9-10.

gave Strauss direct, personal access to Eisenhower and with it enormous power and responsibility."34

Unfortunately, the AEC Chairman made it more, rather than less, difficult to resolve the tensions with Japan caused by the Fukuryu Maru incident.35 He was very suspicious of the Japanese claims regarding the damage caused by the American test on March 1. These suspicions were reinforced by his anti-communist worldview. Strauss told James Hagerty that the Fukuryu Maru was not a Japanese fishing boat at all -- but rather a "Red spy outfit" investigating the American testing program. Apparently, Strauss also told the press secretary that "If I were the Reds, I would fill the oceans all over the world with radioactive fish. It would be so easy to do!"36

At a press conference on March 31, the AEC chairman presented a statement, approved by the president, regarding the American tests in the Pacific. Beforehand, Hagerty promised reporters that Strauss would provide them with the "authoritative account" of the BRAVO episode in the Pacific.37 However, during the press conference, Strauss made some remarks which failed to live up to this promise. According to his version of the Fukuryu Maru incident, the Japanese fishing boat was guilty of "accidental trespass" since it had "inadvertently" wandered into

34 Divine, Blowing on the Wind, 11.
36 Divine, Blowing on the Wind, 11.
37 Divine, Blowing on the Wind, 9.
the "danger zone" established by the Atomic Energy Commission. As Strauss knew, however, the vessel had actually been outside the AEC's announced danger area when it was radiated.\footnote{See the AEC's diagram of the danger zone in Hewlett and Holl, \textit{Atoms for Peace and War}, 172; and Telegram from A.S Halford, Counsellor, British Embassy in Tokyo to Colin Crowe, Far Eastern Department, Foreign Office, April 7, 1954, F0371/110695, PRO, Kew.}

The AEC head also attempted to minimize the damage caused by "Bravo". Citing inspections of cargoes conducted by the Food and Drug Administration, he denied reports of widespread contamination of tuna and other fish because of the American test. According to him, at certain times of the year in the waters around the proving grounds of Bikini and Eniwetok, "almost all fish caught were normally poisonous as a result of feeding on certain seasonally prevalent micro-organisms." Strauss dismissed the press reports describing the test that took place on March 1 as "devastating" and "out of control". These reports were "misapprehensions" resulting from the fact that the yield of the test was "about double that of the calculated estimate" and that the wind had shifted unexpectedly, carrying fallout to the area where the \textit{Fukuryu Maru} crew were fishing.

Strauss acknowledged that the fallout had also rained down on 236 inhabitants of the little islands of Rongelap, Rongerik and Uterik and on twenty-eight American personnel who had been manning weather stations in the same contaminated area. After the test, the Task Force Commander had evacuated all of the natives on the affected islands to Kwajalein for medical observation. Strauss himself had visited these people and found
them all "to be well and happy." Indeed, the medical staff on Kwajalein anticipated no illness in these people. As a matter of fact, Strauss continued, "we have more natives than we started with ... since one child was born while I was there and four more were expected." (This caused laughter at the press conference.) In a more sober vein, Strauss acknowledged that the situation with respect to the twenty-three Japanese fishermen was "less certain," but he emphasized that their blood counts were comparable to those of the affected American weather personnel (who had been returned to duty). Although skin lesions had been observed on the Japanese fishermen, Strauss argued that these were caused by the "chemical activity of the converted material in the coral," rather than by their exposure to radioactivity.\(^{39}\)

Strauss' soothing assurances contradicted the information that was flowing into the State Department on a daily basis from the American Embassy in Japan. During the period from March 16 to 31 many telegrams arrived asking the AEC (and any other organizations) to give advice about radiation sickness because the condition of the Japanese fishermen was worsening. On March 24, Allison asked Washington for a "summary of stateside experience with skin contamination" since the "sailors' skins [were] showing spotty activity which resisted cleaning."\(^{40}\) A week later, on the very morning of Strauss' press conference, the


\(^{40}\) Telegram from the American Embassy in Tokyo to the State Department, March 24, 1954, DSRG 59, 711.5611/3-2454, NA, Washington.
State Department received another message from Allison warning that "Informed advice regarding patients today indicate blood counts of three [of the fishermen] remain dangerously low." Later that same day, the ambassador urgently cabled for "advice as to any new type of therapy to treat radiation injuries."41

When Strauss made his misleading statements on March 31, he was probably influenced by both a desire to protect the reputation of his agency and by his distrust of the Soviet Union. During the speech, he justified the extensive American testing program42 on the grounds that it was necessary to compensate for the fact that the U.S. no longer possessed the "monopoly of capability" in the hydrogen weapons field.43 In his view, the continuation of testing would enable the U.S. to be fully aware of the "possible, future, aggressive ability, of an enemy." The message here was clear: the United States needed more nuclear tests to protect itself against the threat posed by the Soviet Union.

At the end of his press statement, Strauss emphasized the

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41 Two Telegrams from the American Embassy in Tokyo to the State Department, March 31, 1954 (8:16 a.m., 11:19 p.m.), DSRG 59, 711.5611/3-3154, NA, Washington.

42 According to Strauss, there were several other warning areas. Great Britain maintained one off Australia. The U.S. had further areas off the Pacific Coast at Point Magu, and off the Hawaiian Islands. There was also a large guided missile warning area from Florida across to the Bahamas. In sum, the U.S. had "established a total [including continental areas] of 447 such warning and/or danger areas."

positive side of testing. According to him, one of the important consequences of the series in the Pacific had been the "great enhancement of our military capability to the point where we should soon be more free to increase our emphasis on the peaceful use of atomic power, both at home and abroad." With this conclusion, Strauss drew on a theme which would become increasingly useful to the AEC and the administration when it publicly justified the continuation of American tests. The administration hoped that associating nuclear power with images of the "peaceful atom" would help soothe public concerns about nuclear explosions. Indeed, after his speech, the Operations Coordinating Board (OCB), the body responsible for disseminating information related to nuclear weapons, encouraged Strauss and the AEC to continue "debunking" the widespread "fantasies" about the effects of radiation on health and to repeat the "peaceful atom" theme in any of the public statements regarding American nuclear tests.45

Not surprisingly, Strauss' speech failed to alleviate Japanese anxieties. On the same day that the AEC head made his public statement, the Japanese government sent an Aide Memoire to the U.S. listing its grievances in the wake of the Fukuryu Maru incident and stressing the serious psychological and physical effects of the episode. It also protested against the U.S.


government's decision (conveyed on March 18) to expand the danger zone around its testing site in the Pacific. After "Bravo", the U.S. decided to enlarge the area from 67,000 square miles to 570,000 square miles. As the Japanese government pointed out, this expansion would have very negative effects on the Japanese fishing industry (which employed over one million people). While the catch from this area itself was not very great, accounting for only about one per cent of the total catch of tuna by the Japanese fishing industry, Japan's biggest fishing areas lay just south and south-east of the danger zone, around the Solomons, the Gilberts, and the Samoas. About three hundred vessels, of varying tonnage, operated in these areas, their catches accounting for 60-65 percent of the total for the entire fishing industry. Since these boats usually passed through the newly proclaimed danger zone both on their way to and from these abundant fishing grounds, the expansion of the danger zone "not only made it well nigh impossible for fishing to take place in the danger area, but also forced the Japanese fishing boats operating south and south-east of the expanded area ... to make detours which involved sailing of two and a half to three days." In order to mitigate these additional burdens on its fishing industry, the Japanese government asked the U.S. not to conduct further tests during the period from November to the end of March, since this was the fishing season for tuna in this area.

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47 Hewlett and Holl, Atoms for Peace and War, 178.
They also asked that the American government inform Tokyo in advance of the approximate date of each test. Finally, they wanted the U.S. to take effective and appropriate steps including proper warnings (in the Japanese language) to allow time for the vessels to evacuate the danger area before the tests began.48

The State Department was not at all sympathetic to the Japanese request. In a telegram to the American Embassy in Tokyo, Secretary Dulles suggested that the Japanese concerns about the enlarged danger zone were "exaggerated." Accordingly, the United States would not reduce the danger area until the end of June, upon the completion of the test series. Advance notice about the dates of the tests was undesirable because of the possibility of delays and for "security reasons." The U.S. would attempt to provide warnings to ships inadvertently entering the danger area, but the best precaution was for the Japanese fishermen to stay out of the areas altogether. Finally, it would simply be impossible for the Atomic Energy Commission to accommodate its testing schedule to the Japanese fishing season since the scientific laboratories had determined that January and February were the best months in terms of weather to conduct the tests. According to Dulles, the importance of the American nuclear development program "to national and world security" outweighed the concerns of the Japanese fishermen.49


49 Telegram from Secretary Dulles to the American Embassy in Tokyo, April 7, 1954, DSRG 59, 711.5611/3-3154, NA, Washington.
Ambassador Allison, the State Department conveyed its regret for the Fukuryu Maru incident and its concern for the crew members. Precautions would be taken to prevent a repetition of this "accident", but the Japanese had to understand that the development of nuclear weapons was important to the "security of the free world." 

Combined with the publication of Strauss' press statement and the unannounced second American test on March 26, the State Department's approach resulted in a worsening of Japanese-American relations. In addition, the American embassy in Tokyo continued to receive reports that testing was affecting other Japanese fishing boats. In order to deal with the mounting political problems caused by these reports, Allison asked the Atomic Energy Commission to send a non-technical statement for public release emphasizing the "omnipresence of natural radioactivity" as a possible cause of the low level radiation found on the fishing boats. Complying with this request, the AEC's Division of Biology and Medicine proposed a statement which

50 Telegram from Allison in Tokyo to the Department of State, April 9, 1954, DSRG 59, 711.5611/4-954, NA, Washington.

51 According to one report, the Koei Maru disposed of 7,000 tons of tuna because of its exposure to the March 1 test. A list of seven other "radioactive boats" (reported between March 20 and April 5) was given to the American Embassy by the Japanese Foreign Office. During the second week of April, the Ambassador cabled Washington that reports "of new arrivals of fishing vessels with low-level radioactive readings on the hulls, crew and catch" were appearing on a daily basis. See four telegrams from the American Embassy in Tokyo to the Secretary of State, April 3, 8, 9, 10, 1954, DSRG 59, 711.5611/4-954, 4-1054, 4-3054, NA, Washington.

included the assurance that "Not all of the radiation which one ordinarily observes with Geiger counters comes from atomic bombs. There is natural background radiation everywhere ... on the earth's surface, in the air, and even in human and animal bodies and in plants."\textsuperscript{53}

Undoubtedly, this statement did little to reassure the Japanese since radioactive fishing boats continued to arrive in port. The inspection of fish became even more important to the Japanese at this time. The Japanese Ministry of Welfare and fish exporters made numerous requests to the American embassy for additional geiger counters to facilitate the monitoring of tuna.\textsuperscript{54} In addition, the Japanese government approached H. Merrill Eisenbud, Director of the Health and Safety Laboratory of the Atomic Energy Commission (who was in Tokyo at the time), for recommendations regarding the maximum permissible contamination level for fish. He was also asked what type of examination procedure was best. Eisenbud's answers were neither concrete nor reassuring. Recognizing that there were numerous tuna shipments involved, and that it would be difficult to monitor them all efficiently with inexperienced personnel and only a few survey instruments, he recommended that the Japanese monitor only a small percentage of the fish, perhaps every tenth fish.


\textsuperscript{54} Telegram from the American Embassy in Tokyo to the Secretary of State, April 16, 1954, DSRG 59, 711.5611/4-1654, NA, Washington.
Regarding the acceptable levels of contamination, Eisenbud responded vaguely that it was not a simple matter to evaluate the risk to the consumer using the methods available. Although he felt "unable to propose a realistic figure without some study," it was his "belief" that significantly contaminated fish were not likely to be found. Even if low level radioactivity was present on the surface of the tuna, he suggested that the practice of skinning the fish prior to canning "probably" would minimize the health risk.\(^5^5\)

On April 21, Ambassador Allison reported that a "new low point" in official Japanese hostility had been reached with the release of an open letter to the U.S. medical community and to the Japanese public by the Atomic Disease Investigation and Research Council, an organ of the Japanese Ministry of Welfare. This letter, written by doctors, emphasized several points: first, that the condition of the affected fishermen was serious and showed no sign of improvement; secondly, that the Japanese government had frequently called on the U.S. medical establishment to give advice or treatment but to no avail; and thirdly, that they were still calling for, and "earnestly hoped for, advice from any circles (repeat any circles) both at home and abroad re medical treatment."

At a press conference following the release of this letter, four prominent physicians at Tokyo Hospital and Tokyo University

\(^{55}\) Telegram from the American Embassy in Tokyo to the Department of State, including the memo from Herrl Eisenbud, (written "prior to" April 9, 1954), DSRG 59, 711.5611/4-3054, NA, Washington.
issued statements asking specialists anywhere in the world for information on treatment which would remove strontium-90 (a radioactive isotope) from the fishermen's bones. They also wanted the American public to know that the U.S. government's claim that American doctors had been refused access to the Japanese fishermen was incorrect.

In Allison's opinion, there were two possible explanations for the "mendacity" of the statements made by the Japanese doctors. Either they were trying to offset the slight improvement in Japanese attitudes which had followed some optimistic statements made by the U.S. regarding the condition of the patients, or the condition of some of the patients was deteriorating so markedly that the Japanese doctors were simply attempting to "exculpate their own responsibility". Another possibility was that the Japanese specialists really were looking for help. Through Allison, the Japanese doctors had repeatedly asked the American government for more information about radiation therapies. However, the State Department had not been very cooperative. In one response, for example, the secretary of state explained that such information would not be forthcoming until the U.S. government first obtained detailed clinical data and complete access to the patients. In another

56 Telegram from Allison in Tokyo to the Secretary of State, April 21, 1954, DSRG 59, 711.5611/4-2154, NA, Washington.

57 On April 1, for example, Allison had sent another "urgent" request asking the State Department to "Please cable your advice as to any new type therapy treatment radiation injuries." See Telegram from the American Embassy in Tokyo to the Secretary of State, April 1, 1954, DSRG 59, 711.5611/4-154, NA, Washington.
telegram, Dulles concluded that "In the absence of adequate information re: actual condition of the patients, [we] feel it unwise to advise methods of treatment."  

Rather than admit that there might be some truth to the Japanese statements, the ambassador decided on a much different approach, involving threats and intimidation. Allison immediately contacted the Foreign Ministry and protested strongly against the statements made by the Japanese doctors. He also threatened that if Washington was "forced to put out the true story, there would be created an atmosphere in the U.S. far from congenial" for Prime Minister Shigeru Yoshida's already planned trip to the United States. He strongly recommended that the Japanese government immediately publish an "official correction" of the doctors' statements. This approach yielded quick results. The same evening that Allison delivered the threat, the Chief of the Asian Affairs Bureau called (under instruction from the Foreign Minister) to inform Allison that the Japanese Ministry of Welfare had been reprimanded. The specialists "now appreciated" that their "irresponsible" statements had harmed Japan's relations with the U.S. In the future, the cooperation of the Ministry "would improve."

58 Two telegrams from Secretary Dulles to the American Embassy in Tokyo, April 1, 2, 1954, DSRG 59, 711.5611/4-154, NA, Washington.

59 Telegram from Allison in Tokyo to the State Department, April 21, 1954, DSRG 59, 711.5611/4-2154, NA, Washington. Five months later, when Prime Minister Yoshida visited the United States, he combined a statement of his concern about hydrogen tests with a concession that they were necessary. See Divine, Blowing on the Wind, 30.
Nevertheless, in the spring of 1954, Japanese-American relations continued to deteriorate as a result of the U.S. testing program in the Pacific. In late April, the American embassy in Tokyo received many reports that more radioactive vessels were entering port. As a result, Allison felt the need to request additional information from the State Department regarding the acceptable tolerance level for radioactive tuna. In response, the department sent a letter, prepared by the Food and Drug Administration and the AEC, based upon the best data available, which recommended that tuna with no more than 10% of radioactive Strontium would be safe for consumption.

In early May, the State Department was also forced to deal with alarming information indicating that, despite their own assurances to the contrary, some of the crewmen from the Fukuryu Maru were in very serious condition (with low blood counts) because of their exposure to high levels of radioactivity. Much of this information came from a report prepared by the AEC's own Division of Biology and Medicine. Although the report, which was

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60 On April 26, the embassy received reports that a U.S. freighter, the "GUNNER'S KNOT" of the Micronesian Shipping Company, was found to be radioactive upon arrival in Yokohama from Guam. Apparently the vessel had inadvertently entered the hazard zone between March 26 and 29. See two telegrams from Allison in Tokyo to the Secretary of State, April 27 and 30, 1954, DSRG 59, 711.5611/4-2754, 4-2954, NA, Washington. On April 30, the embassy received reports that another freighter, the "SS ROQUE" (which had also put in at Guam), was found to be "carrying traces of radioactivity" when it arrived in Yokohama. See telegram from G.C. Smith, Acting Secretary of State, to the American Embassy in Tokyo, April 30, 1954, DSRG 59, 711.5611/4-3054, NA, Washington.

unclassified, was made available to the Joint Committee on Atomic Energy, the State Department requested that the Committee keep its contents under wraps to prevent the "unfavourable repercussions that would follow its public release."  

The State Department knew full well that feelings were running high in Japan over atomic testing, despite American efforts at reassurance. Robert Murphy, the Acting Secretary of State for International Political Affairs, explained to Dulles that the testing program had turned into such an "emotional affair" in Japan that it "didn't work out too well politically." Because the Japanese had developed "almost a complex about their fateful exposure to atomic explosions," they had over-reacted and "grossly" misinterpreted Geiger counter readings. Although the U.S. government sent experts to see the ill fishermen, this assistance failed to alleviate the distress of the victims or their families. Murphy felt that the "emotional tide" in Japan was strongly against the U.S. The State Department, he reported, was attempting by political and psychological means to "restore some balance" among the Japanese. The U.S. agreed, for example, to participate with the Japanese in a research expedition to the Marshall Islands to examine how the explosions had affected marine life and weather. Washington also tried to emphasize to the Japanese (and to the whole world) their desire to develop benign applications for atomic energy and to bring it under effective, safeguarded international control. By these and other

means, Murphy hoped that the American government would help countries like Japan "put the H-Bomb in perspective."63

Eisenhower himself grew so alarmed at the worsening state of Japanese-American relations that he asked the State Department to prepare a brief analysis of how to improve the situation.64 Responding to this request, Murphy informed the president that the present Yoshida government could not always keep a rein on its own bureaucracy and that the Japanese were "pathologically sensitive" about nuclear weapons. To smooth relations with the Japanese government, the State Department was, among other things, considering compensation for the injured fishermen and had, with the cooperation of the AEC, transmitted to the Japanese scientific data on radioactivity, believing that scientific interchange was in the long run the best antidote to Japanese "emotion and ignorance." Murphy also cautioned that the U.S. had to begin treating Japan more like a "free-world partner" if it wanted to uphold its interests there, including the use of Japanese bases.65

Meanwhile, complaints addressed to the American government continued to arrive from the various prefectures, such as Kyushu and Yamaguchi, detailing direct and indirect losses to fishermen

63 Letter from Murphy to the State Department, May 18, 1954, 711.5611/5-454, DSRG 59, NA, Washington.

64 Memo from the President to the Secretary of State, May 26, 1954, DSRG 59, 711.5611/5-2664, NA, Washington.

from contaminated fish and requesting compensation. Responding to a letter from Katsuji Sugimoto, Chairman of the Governor's Conference, Ambassador Allison expressed his regret for the damage caused "inadvertently" by the American thermonuclear explosions but stated that his government was concerned mainly with those who had suffered direct injury as a result of the tests (e.g., the Fukuryu Maru crew) and would compensate only those persons. Common sense and the established principles of international law would dictate the settlement of claims from individuals "only remotely connected with the tests." In addition, the Japanese should understand that the American government was not planning to stop its testing program, since the security of the United States as well as Japan and the entire "Free World" depended on it.

Notwithstanding Allison's promises, it soon became obvious that it would be very difficult for the American government to assure the health and safety of either the people living in the

66 In the Kagoshima prefecture alone during the months of May and June, the catches from at least fifty-six boats had been thrown overboard due to contamination. See Letter from Katsuji Sugimoto, Chairman of the Governors Conference, Kyushu, and Governor of Fukuoka Prefecture, to James Victor Martin, Consul of the U.S. Government, Fukuoka, Japan, June 23, 1954, DSRG 59, 711.5611/No number, NA, Washington. According to the British Embassy in Tokyo, "By May 10, 56 million pounds of tuna had been found radioactive in 61 boat loads. Of these 207,460 pounds had been regarded as sufficiently radioactive to be dangerous, and were disposed of. Some of these fish had been caught in areas as far away from Bikini as the waters around Okinawa." See telegram from R.T.D. Ledward, British Embassy in Tokyo to F.W. Marten, Esq., Far Eastern Department, Foreign Office, London, May 26, 1954, FO371/110695, PRO, Kew.

vicinity of the Pacific test sites or even those living in the United States. About five days after Allison gave his assurances to Sugimoto, Secretary Dulles notified the Tokyo embassy that a warning would be released to mariners to stay clear of Rongelap, Rongerik, and Alingini (in the Marshall Islands) because of the dangerous levels of residual radiation from the recent tests. In addition, a draft AEC report entitled "Fallout in the United States" acknowledged that a radioisotope (Iodine 131) had been discovered in the U.S. after the Pacific tests. According to the Commission,

Radioactive debris is distributed by normal air currents over large areas (after nuclear detonations), and with sufficiently sensitive instruments may be found to encircle the globe. Small amounts were deposited widely over the United States during the Pacific tests .... Transportation of the radioactive materials to the United States took only several days. Thus some of the shorter half-life radioisotopes, such as Iodine 131, were still present in the fall-out .... it was possible by special techniques, to demonstrate radioiodine in the thyroid glands and in the urine of grazing animals. Extremely minute quantities were also detectable in the urine of some humans for a short time ....

Despite these rather alarming findings, the draft report concluded that the air-borne radioactive materials detected outside the Pacific Proving Grounds presented no hazard to human health. Radioactive materials were not only carried to the

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68 Telegram from Secretary Dulles to the American Embassy in Tokyo, June 28, 1954, DSRG 59, 711.5611/6-2854, NA, Washington.


70 Ibid.
people of the United States by air, however, but also in contaminated fish. In early July, inspectors from the Food and Drug Administration reported their discovery of at least three radioactive tuna among exports from Japan in a California cannery. The radioactivity was found largely in the skull and bones of the fish, indicating contamination through ingestion. Undoubtedly, this information surprised the American administration, given their experts' opinions that the monitoring process in Japan (1 out of every 10 fish), combined with the canning process (which removed the skin of the fish, the only place where the experts expected to find radioactivity), would prevent the importation of radioactive fish from the Pacific into the U.S. Perhaps aware of the political consequences that would result if this information reached the American public, the State Department decided that it would "not at this time inform the Embassy in Tokyo" of this discovery.\(^7^1\)

Despite growing evidence that the Pacific tests had resulted in a variety of harmful effects, the State Department continued to downplay this in their public statements and sought to allay the fears of individual citizens through reassuring letters.\(^7^2\)

\(^7^1\) State Department Memo, July 6, 1954, DSRG 59, 711.5611/7-654, NA, Washington.

\(^7^2\) Mrs. Robert H. Gallaher, of Salt Lake City, Utah, sent a letter to the State Department describing her worries about the effects of the U.S. testing program. In response, Howard A. Cook, the chief of the State Department's Public Services Division, attempted to assuage her worries. Agreeing that the \textit{Fukuryu Maru} incident had been an "unfortunate accident," he suggested that "none of the injured men had died, and all appeared to be on the road to recovery." Mrs. Gallaher would also be glad to know that "the Japanese people had learned that many of the rumours
The administration's political problems with Japan would not be resolved so easily, however. By early July, more than a million Japanese citizens had signed a petition calling for a ban on all nuclear weapons. On August 6, 1954, the 9th anniversary of Hiroshima, some of the Fukuryu Maru victims gave interviews to the press expressing their dissatisfaction with the way that the U.S. was handling the negotiations with their government regarding compensation for the damages caused by the March 1 test. Emphasizing their health problems, they compared themselves to the victims of Hiroshima and Nagasaki. One patient expressed the hope that some Americans would show concern for their plight, disappointed that "he had not yet heard their voice."  

Perhaps in an attempt to avoid a recurrence of the political problems caused by the American tests in the Pacific, Eisenhower approved plans to hold the next series in the United States, at the Nevada Proving Grounds. In late August 1954, Lewis Strauss requested approval from Eisenhower for the new series, designated "Operation Teapot," to begin in the spring of 1955. The AEC concerning extensive contamination of fish, ocean currents, air, crops and rain were entirely without foundation." In his view, these rumours were merely the result of "malicious propaganda inspired by Communist and left-wing elements." The "free world" realized that a single incident involving twenty-three fishermen "did not justify ... exposing itself to communist attack through failure to develop adequate retaliatory weapons." See Letter from Howard A. Cook to Mrs. Robert H. Gallaher (on behalf of Secretary Dulles) August 3, 1954, DSRG 59, 711.5611/954, NA, Washington.


Chairman described the proposed tests as "highly important to the development of weapons for tactical and air defense application and of lighter-weight thermonuclear weapons." So as to "favourably affect" opinion at home and abroad, he recommended a public announcement of the upcoming tests.\textsuperscript{75} Also concerned about domestic and international opinion, Eisenhower suggested that the announcement be delivered in a "brief, generalized, and 'dead pan'" manner and include some reference to the "civilian" or "peaceful" uses of atomic energy.\textsuperscript{76}

In addition to planning for a new series of tests, the AEC issued more statements to the Japanese Foreign Office intended to calm public fears about the effects of the previous set of tests. The AEC informed the Japanese that the radioactivity detected in the Pacific was "so small that there was no (Repeat NO) reason to fear any hazard from eating fish caught outside the Bikini and Eniwetok Atolls." Not reassured by this statement, the Japanese became increasingly indignant about the American government's insensitivity to their plight.\textsuperscript{77}

In October, more bad news continued to arrive from Japan. The Japanese Embassy in Washington informed the State Department that they had information indicating that, since the early part of August, a number of additional cases had been reported where

\textsuperscript{75} Letter from Lewis Strauss to the President, August 30, 1954, OCB Series, Subject Subseries, WHOSANSA, DDEL, Abilene.

\textsuperscript{76} Memo from Robert Cutler for the AEC Chairman, September 7, 1954, OCB Series, Subject Subseries, WHOSANSA, DDEL, Abilene.

\textsuperscript{77} Telegram from Allison in Tokyo to the Secretary of State, September 16, 1954, DSRG 59, 711.5611/9-1654, NA, Washington.
"unusually high radioactivity counts of 1,000 or more were found on the catch of Japanese fishing boats." As a result of these high levels of radioactivity, some individuals in the Japanese government suspected that the U.S. had conducted a secret "new experiment."78

More unsettling news arrived a few days later when the U.S. government learned that one of the fishermen, Aikichi Kuboyama, had died of radiation sickness.79 The funeral ceremony took place at Kuboyama's home port of Yaizu. Ambassador Allison did not attend but three of his subordinates were present and one of them read a brief note of condolence prepared by the Embassy.80 This message emphasized the "accidental" nature of the incident; it expressed regret that such an "accident" had occurred and hope that such an "accident" would not happen again. There was no mention of the cause of Kuboyama's death in the note; instead, it recommended that Kuboyama should be honoured as a "man who is now united with numberless others who went down to the sea in ships." Since the damage could not be undone, the Americans suggested, using a rather unfortunate choice of words that, "in these respects and in many others too, we are as the 'Haiki Monogatari' truly says only as dust in the face of the wind." Although it was impossible to change the past, it was necessary to come away


79 He had died on September 23, 1954.

from this funeral with "renewed determination to build a world in which true peace and freedom can prevail, in which the dignity of human life can be made secure for all."  

Coupled with this brief message, the Eisenhower administration gave Kuboyama's wife a check for one million yen (about $2,800). Later, a two million dollar settlement was reached with the Japanese government for loss of life and property caused by the American tests. It is unlikely that these overtures provided much comfort either to the family of the dead fisherman or the Japanese people concerned about their fate in the nuclear age. As Ambassador Allison admitted much later, an apology to the Japanese should have been made "at the very beginning." A handbill dedicated to the "departed soul of Mr. Kuboyama" expressed some of the anxieties and feelings of the Japanese people at the time:

The native town was destroyed by fire
And relatives killed on this scorched land.
Now white flowers dot the scene.
Ah! We'll never allow an A-Bomb to explode,
To explode for a third time,
Over our town.

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81 Message of Condolence from the American Ambassador in Tokyo, October 9, 1954, DSRG 59, 711.5611/No Number, NA, Washington.

82 Divine, Blowing on the Wind, 30-1. The Eisenhower administration stalled on the question of compensation until late December. Convinced that the haggling over the amount of compensation should end, and impressed with the new Japanese Prime Minister, Hatayoma Ichiro, Ambassador Allison advised that it would be "most helpful" if the American government reached a settlement by New Year's Eve, the traditional time for settling debts in Japan. The president agreed, and in early January the Japanese government was finally paid the compensation. See Dingman, "Alliance in Crisis," 205.

83 Divine, Blowing on the Wind, 30.
The sea of the native town is stormy,
Black rain falls and folks are depressed,
Fisher-boats drift abandoned.
Ah! We'll never allow an A-Bomb to explode,
To explode for a third time,
Over our sea ...

For a decade after the *Fukuryu Maru* incident, annual commemorations were held at Kuboyama's grave-site and demonstrations against nuclear testing took place in Tokyo and other major cities in Japan. However, as Dingman points out, the effects of the March 1 test had "far less dramatic effects on Americans."^85^ Largely unaware of the impact of the "Castle" series on the Japanese, most Americans had lost interest in nuclear tests by the summer and fall of 1954. A Gallup poll taken back in April, after the initial interest in nuclear tests had subsided, indicated that only 20 percent of Americans thought the hydrogen bomb made another world war more likely whereas 54 percent believed that it made such a war less likely. Another poll had shown that 71 percent of the public were opposed when asked whether the United States "should call off the rest of the [planned] hydrogen bomb tests?"^86^ Apparently, the American

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^84^ Handbill, No Author, Undated, DSRG 59, 711.5611/No Number, NA, Washington. Although no information accompanied this handbill in the archive folder, Dingman mentions that on their way to Kuboyama's funeral, the American representatives were surrounded by angry demonstrators who stuffed handbills inside their car. See Dingman, "Alliance in Crisis," 202.


government, aided by the AEC, had done a good job of convincing the American people that continued testing was necessary, despite the cost to the health and welfare of the Japanese and others.

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In addition to the harm done to the Japanese fishermen and their families, American testing also adversely affected many hundreds, perhaps thousands, of Marshallese. When the AEC was planning for the "Castle" series in the Pacific, concern about the spread of radioactive fallout was not one of its primary considerations. The agency's lack of concern was clearly reflected in the definition of the "danger zone" that it created for the tests. When the commission established this area, it decided not to include the two long chains of atolls that composed the Marshall Islands, located east of the test site at Bikini. The AEC made this decision even though it realized that significant fallout on these atolls was theoretically possible, especially in the event of unfavourable shifts in wind and precipitation patterns. The nearest atolls, Rongelap and Ailinginae, were located just fifty miles north-east of the test site. If the danger area had been established with the fallout hazard as the primary concern, these atolls obviously would have been included in its boundaries. However, because the AEC was more preoccupied with security than the health of the people living on these atolls, it excluded the islands from the so-called "danger zone." Their inclusion would have required both the notification and evacuation of the inhabitants for the duration of the "Castle" series. Thus, as Hewlett and Holl point
out, the eastern boundary of the area established by the AEC was fixed "primarily for security reasons, and to that extent it was misleading to refer to the zone as a 'danger area.'"\(^{87}\) It was misleading because the danger zone did not include any of the Marshall Islands, all of which were vulnerable to fallout from the American nuclear tests.

Shortly after the "Bravo" shot, the inhabitants of Rongelap and Uterik began to suffer in varying degrees from low blood counts, burns, nausea and loss of hair. These problems first came to the attention of the State Department when the Marshallese submitted a petition to the United Nations in early May 1954 protesting against the tests. The Marshallese made it clear that they did not wish to repudiate the U.S. as the governing agency for the Marshall Islands under a UN trusteeship.\(^{88}\) Nevertheless, in view of the increasing danger from the American nuclear explosions, they felt compelled to bring an "urgent plea" to the United Nations to get the tests stopped. In their view, the UN was the appropriate organization of appeal due to its pledge to "safeguard the life, liberty and general well-being of the Trust Territory."\(^{89}\)

Not only were the Marshallese afraid of the danger to

\(^{87}\) Hewlett and Holl, *Atoms for Peace and War*, 171.

\(^{88}\) The agreement approving the trusteeship for former Japanese Mandated Islands was approved by the UN Security Council on April 2, 1947 and entered into force on July 18 of the same year.

\(^{89}\) Petition to the UN from the Marshallese People, April 20, 1954 (transmitted to the U.S. on May 5, 1954), DSRG 59, 711.5611/5-654, NA, Washington.
themselves from these deadly exposions, they were also concerned about the increasing number of people being removed from their homes because of American tests. Before and during World War Two, the Japanese took away the best portion of the atolls, namely Jaluit, Kwajalein, Eniwetok, Metle, Maloelap and Wotje. Since the end of the war, however, the U.S. had returned only one island (Imedj of the Jaluit Atoll) to the Marshallese. The U.S. had kept Kwajalein Island for military and "security" purposes. And it had moved the inhabitants of the Bikini and Eniwetok atolls (which were being used as testing sites) to Kili Island and the Ujelang Atoll, respectively. In addition, the inhabitants of Rongelap and Uterik were moved to Kwajalein for an indeterminate length of time because their islands were radioactive. Therefore, the Marshallese felt compelled to ask the question: "Where next?"

In their petition, the Marshallese made several reasonable requests. They asked the United States to terminate the tests in the Marshall Islands. But if this was impossible, that is, if the UN judged that these tests were absolutely necessary, then they asked the American government to proceed with greater regard to their safety. Next time, the U.S. should transport all inhabitants and their valuable possessions to safe locations before the explosions occurred. In addition, it should give safety instructions to the people living near the testing sites since "The people of Rongelap would have avoided much danger if they had known not to drink the water ... after the radioactive dust had settled on the island." Finally, Washington should give
compensation to those forced to evacuate their homes. If the U.S. set aside adequate funds now for this purpose, perhaps the "unsatisfactory arrangements for the Bikinians and the Eniwetok people would not be repeated." 90

In their response to the petition from the Marshallese at the UN, the American delegation issued a carefully worded statement from Secretary Dulles, jointly drafted by the Atomic Energy Commission, the Department of Defense and the Department of State. This document expressed the American government's regret for the effects that the thermonuclear tests in the Pacific Proving Grounds "appeared to have had on certain of the inhabitants of the Marshall Islands." The 236 inhabitants who, "because of a windshift, were in the area affected by fall-out," would remain under observation and if any of them needed it, they would receive the best medical attention available. However, there was "no medical reason to expect any permanent after-effects on the general health [of the inhabitants], due to fall-out." While it was impossible to assure the petitioners that "all experiments with lethal weapons within this area would immediately cease," the American government emphasized that these tests were necessary "in the interests of general peace and security." 91

In Blowing on the Wind, Divine argues that although the "AEC did not intentionally dust the Marshall islanders and the

90 Ibid.

91 Telegram from Department of State to the USUN, May 6, 1954, DSRG 59, 711.5611/5-654, NA, Washington.
Japanese fishermen with fallout ... the Commission must bear the blame for failing to admit full responsibility for the accident and for trying to disguise the extent of the damage." 92 However, recently declassified Defence Department documents suggest that the AEC not only knew about the contamination suffered by the Marshallese and Japanese as a result of "Bravo," but may have knowingly caused it. According to official documents presented at a Congressional hearing in February 1994, the Eisenhower administration knew twelve hours in advance of the Bikini test that the wind direction was changing, but proceeded with the explosion anyway. "The shot was deliberately set off despite the fact that the AEC officials knew exactly which way the winds were headed," Jonathan Weisgall, an attorney for the inhabitants of Bikini Island, told the House Natural Resources Investigations Subcommittee. The documents also indicate that the radiation fallout from the March 1, 1954 test extended over as many as 28 islands and atolls in the Marshall chain and may have affected thousands of people instead of the 236 acknowledged by the AEC Chairman. 93

On May 11, 1954, the AEC and DOD announced the end of the "Castle" series in the Pacific. The statement, prepared by Chairman Strauss and Secretary of Defense Wilson, justified the American tests on the grounds that they advanced the development of thermonuclear weapons, were "essential to the national

92 Divine, Blowing on the Wind, 30.

interest," and "contributed materially to the security of the United States and the free world."

In July, a debate took place before the UN Trusteeship Council on the issue of American tests in the trust territory. Both India and the Soviet Union introduced resolutions condemning U.S. testing in the territory. Accusing the Russians of trying to gain the propaganda advantage in this debate, Mason Sears, the American delegate to the Trusteeship Council, promised that although precautions would be taken in the future to prevent fallout accidents, the United States would continue its tests "so long as the Communists continue theirs." Dominated by countries friendly to the American government, the Trusteeship Council turned down the Indian and Soviet resolutions. Instead, it asked only that the United States take proper precautions in future tests.

Controversy over the U.S. atomic tests created more problems for the State Department at the United Nations, however. In early August, the department learned from James Wadsworth, the American Deputy Representative at the UN, that the Indian government would probably introduce in the General Assembly a proposal for the World Court to give its opinion on the legality of nuclear testing in the Pacific Trust Territories. Both Wadsworth and Mason Sears were in agreement that, if there was a

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95 Divine, Blowing on the Wind, 28.

96 Ibid.
recurrence of injury to the Marshallese or Japanese as a result of further testing, the U.S. could not count on the support of even its closest allies in the UN in justifying continuation of its atomic experiments in these territories. The two representatives reported that slowness in compensating Bikinians for their removal from their home island in 1946, combined with the lack of compensation to the inhabitants of the Trust Territory who had more recently suffered damage to health, property, and livelihood because of the American tests, had heightened criticism in the Trusteeship Council. When the Council considered the petition from the Marshallese in July 1954, the U.S. offered assurances that steps were being taken both to compensate those Marshallese (from Rongelap and Uterik) who had suffered ill effects from the March 1 test and to shield them against any harmful consequences from future tests. However, these promises remained unfulfilled.

When Secretary Dulles made inquiries about these problems, Lewis Strauss lamely explained that the departments of the Navy and Interior were still negotiating with each other about the compensation owed to the Bikinians displaced in 1946. The AEC "hoped" that this compensation would be discharged in the near future. As for the promises made to the people of Rongelap and

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98 Letter from the Assistant Secretary of State (Mr. Key) to the Acting Secretary of State, September 10, 1954, DSRG 59, 711.5611/9-1054, NA, Washington.
Uterik in 1954, the Department of Defense was intending to settle these claims, once they were submitted. Time was running out, however, since the claims had to be submitted within one year, and the Marshallese had not yet been informed of the necessary procedure. Nevertheless, the AEC chairman was optimistic about the condition of these people. Those from Uterik had already returned to their homes. Continued medical attention was being given to the people of Rongelap, however, since they had received "significant amounts of radioactive contamination." Because of the "residual radioactivity" on their island, they had been temporarily resettled on an island in the Majuro Atoll but would be able to move back to Rongelap by the spring of 1955. As for their health, the preliminary report of the AEC medical teams revealed no permanent ill-effects but as a precaution they would undergo further examination in 1955. In addition, Strauss was considering further projects, such as an agricultural program to increase the food productivity of the islands where the people had been resettled and in the Marshall Islands generally. The aim of this program was to provide displaced islanders with a more "satisfactory ecological environment."  

The distress caused by the American tests would not be as easily alleviated as Strauss imagined. Although there is very little declassified information which describes the actual fate of these people, enough exists to suggest that their sufferings were much more serious than indicated in Strauss’ glib reports.

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According to information provided to the British Foreign Office from Washington, for example, "some of the residents of the islands received radiation exposures in excess of the tolerances set for workers of atomic energy plants." The Rongelapese probably suffered the most. After receiving about 175 roentgens of radiation, they were left on the island for two days before evacuation. The AEC then provided them with only cursory medical treatment. In terms of blood count, they suffered about the same degree of damage as did the Japanese who were about 1.5 miles from ground zero at Hiroshima and Nagasaki. Their white blood cells fell to 50 percent of normal in some cases and several of the children nearly died. Even before evacuation, the people on Rongelap began to suffer from nausea, diarrhea, headaches, eye pain, numbness, and skin discoloration. According to Jabwl Jojur, a health aide from Rongelap: "After some days, a medical team flew out from the U.S. ... we had burns all over our bodies and our hair began to fall out. Some people actually went bald. When we asked the AEC doctors what had happened they did


101 The inhabitants of the other islands received less exposure: the people on Ailinginae received 80 roentgens of radioactivity, Rongerik 40-98, and Uterik 17. However, these levels were still dangerous to human health since, as Hewlett and Holl point out, the maximum permissible dosage of radiation for AEC personnel in 1954 was 3.9 roentgens. See Atoms for Peace and War, 174-175, 612, fn. 63.

102 Divine, Blowing on the Wind, 29.
not tell us ..." The contamination on their island was so great that the Rongelapese were not permitted to return until June 1957.  

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People living in India -- the leading neutral country in Asia -- were very critical of American tests. They were not satisfied with the argument that nuclear explosions contributed to the "security of the free world." According to William T. Turner, the American Consul General in Bombay, the tests produced a powerful reaction in India against the "American cult of bombs." In addition to the reaction against the tests themselves, there was a strong disapproval of America's failure to consult in advance "not only on the explosions but on matters of policy relating to nuclear bombs." From Turner's perspective, the American tests had created an atmosphere in which opposition to U.S. military aid to Pakistan had intensified. The American contention that Russia was the principal source of fear and danger to the world had been weakened. In general, American "stock" in India had fallen to a "further lower level" as a result of the tests in the Pacific.

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104 Hewlett and Holl, *Atoms for Peace and War*, 175.

105 As one politician had remarked: "Good will for America in India hit a low point in the hub-bub over alleged American interference in Kashmir last year; it hit a still lower point after the announcement of U.S. military aid to Pakistan; and now [with the H-Bomb tests] it is lower than ever." See Telegram from the American Consul in Bombay to the Department of State, April 22, 1954, DSRG 59, 711.5611/4-2254, NA, Washington; and H.W. Brands,
According to the British High Commissioner in India, the press there commented extensively on the issue of hydrogen bomb tests, "with particular emphasis on the dangers inherent in alleged American indifference to world and even allied opinion taken in conjunction with Mr. Dulles' military strategy" of "massive retaliation."\textsuperscript{106} J.J. Singh, the Indian ambassador in Washington, pointed out that American nuclear policy made people in Asia feel that the U.S. "did not value coloured people's lives as much as [it] did white people's."\textsuperscript{107} Prime Minister Jawaharlal Nehru suggested that the purpose of the American tests was to "announce to the world ... this might of the U.S. and their readiness to blow up any people or country who came in the way of their policy."\textsuperscript{108} On April 2, 1954, in a formal address to the Indian Parliament, Nehru proposed an immediate "Standstill Agreement" prohibiting testing by all the nuclear powers (at least in the Pacific). The Indian government referred this proposal to the Disarmament Commission of the United Nations.\textsuperscript{109} From this point onwards, the UN would become a forum for proposals calling for a moratorium. As a result, the United States faced increasing international pressure to cease its testing program.

\textit{India and the United States: The Cold Peace} (Boston, 1990), 76-77.

\textsuperscript{106} Brands, \textit{India and the United States}, 76.

\textsuperscript{107} Divine, \textit{Blowing on the Wind}, 20.

\textsuperscript{108} Brands, \textit{India and the United States}, 77.

\textsuperscript{109} Memo, June 23, 1954, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.
Canada's permanent representative at the UN, David Johnson, supported the Indian proposal for a moratorium. He suggested that the West might gain a propaganda boost by agreeing to this proposal; he also thought that the U.S. would gain a military advantage from a moratorium, which would freeze its lead in thermonuclear technology.\footnote{Joseph Levitt, \textit{Pearson and Canada's Role in Nuclear Disarmament and Arms Control Negotiations, 1945-57} (Montreal, 1993), 227.} The French supported Nehru's proposal as well. In a conversation with John Foster Dulles, French Premier Pierre Mendès-France explained that his government would support the Indian call for a nuclear test moratorium at the next meeting of the UN General Assembly.\footnote{Draft memo of conversation, November 19, 1954, Series III, WHOSAD, DDEL, Abilene.}

There was also support for a moratorium in other parts of Western Europe. Testing, the buildup of nuclear weapons, and the expansion of American foreign bases had all contributed to an increasing fear in this part of the world. According to a secret intelligence report prepared for the Department of State, Western European fears over growing American nuclear capabilities became particularly acute in 1954 as a result of the case of the Japanese fishermen. Indeed, "this specific illustration of the dangers of atomic fallout seized the public imagination in the U.K., France, and Italy, as perhaps no other [nuclear] development had, and produced a gravely disturbing effect."\footnote{Intelligence Report #72, Prepared by the Estimates Group for the Department of State, "Recent Effects of Increasing Nuclear Capabilities on U.S. Allies," February 16, 1955, Series III,}
This fear had led to widespread public demands for the cessation of tests.

In the U.K., there was considerable pressure on the Conservative government, led by Prime Minister Winston Churchill, to support Nehru's proposal. In late March, the Labour Party introduced a resolution in Parliament asking the government to seek a summit meeting with the Soviet leadership to arrange for the suspension of all testing. The Opposition also called for more cooperation between the United States and Britain on nuclear weapons policy.

Since World War Two, the British had striven to expand cooperation with Washington in the sharing of nuclear information but they had little to show for their efforts. British scientists had been the first during the war to establish the feasibility of an atomic bomb, and the Maud Report which they wrote in 1941 had been decisive in getting the Manhattan Project off the ground. Because of wartime conditions, the British government was unable to pursue a project of its own and therefore decided that it had no choice but to become a "junior

WHOSAD, DDEL, Abilene.

113 In March 1954, when Gallup asked the British public: "Do you know about the enormous explosion caused by the H-Bomb in the Pacific recently?" 88% said "yes." When asked: "Do you think that an agreement to ban the atom bomb is or is not desirable?", 74% answered in the affirmative. See George Gallup, ed., The Gallup International Public Opinion Polls: Great Britain, 1937-1975 (New York, 1976), I: 320.

114 Divine, Blowing on the Wind, 21.

partner" in the U.S. atomic venture. As a result of secret agreements reached in 1943 and 1944, the British had some access to two parts of the Manhattan Project: the separation of uranium and the fabrication of an atomic weapon. But they had no access either to American plants for the production of the other fissile material, plutonium, or to relevant American knowledge and designs. At the end of the war, the newly elected Labour government under Prime Minister Clement Attlee hoped to continue peacetime atomic cooperation with the U.S. which Roosevelt had promised before he died. The American government dealt a "death blow" to these hopes in July 1946, however, when it passed the McMahon Act (or Atomic Energy Act) forbidding the transmission of restricted nuclear data to any other country. In Anglo-American talks after 1946, the British continued to strive for greater cooperation; but these efforts were unavailing. Thus, as Margaret Gowing points out, "Britain had for the most part to work at her own atomic technology" between 1946 and 1950. In February 1950, the talks with the United States ended abruptly with the arrest of Klaus Fuchs, an atomic spy at the British

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116 At Quebec, on August 19, 1943, Roosevelt and Churchill signed a secret agreement "governing collaboration between the authorities of the U.S. and the U.K. in the matter of Tube Alloys [atomic energy]." On September 18, 1944, this arrangement was reinforced by another secret agreement between the two leaders at Hyde Park. See Martin Sherwin, A World Destroyed: Hiroshima and the Origins of the Arms Race (New York, 1987), 85-86, 284.


Atomic Energy Research Establishment at Harwell. Although the Americans blamed the breakdown of the negotiations on this arrest, the real reason was more fundamental. From the British perspective, it seemed that U.S. policymakers shared "an ill-defined and almost unconscious feeling that atomic energy is and should remain an American monopoly, both for military and industrial purposes."¹¹⁹

Despite the lack of cooperation with the United States, Britain continued its nuclear weapons program because possession of the bomb was perceived as an important way for the country to retain international authority in the postwar world. As William Penney, head of the British bomb program, described the situation in 1951:

[we are] in the position of either having to produce the atomic weapon or admit that for one reason or another we cannot do it. The discriminative test for a first-class power is whether it has made an atomic bomb, and we have either got to pass the test or suffer the serious loss in prestige both inside this country and internationally.¹²⁰

As a result of this perspective, Clement Attlee and his Cabinet became deeply committed to the concept of an independent British nuclear program. But when Churchill returned to power in 1951 he was less firmly devoted to the idea of an independent project and made further attempts at cooperation with the United

¹¹⁹ Simpson, The Independent Nuclear State, 82.

¹²⁰ Blakeway and Lloyd-Roberts, Fields of Thunder, 74.
States.\textsuperscript{121} During that year, his government asked the U.S. to test an atomic bomb for the U.K. in Nevada. However, Washington placed so many restrictions on access to information and procedure that the British conducted their own test, code-named "Hurricane", on October 3, 1952 at the Montebello Islands off Australia.\textsuperscript{122} According to Denys Blakeway and Sue Lloyd Roberts, this test represented the U.K.'s "determination to remain among the decision makers in the post-war world."\textsuperscript{123}

Although this first test was successful, the British continued to seek greater collaboration with the U.S. In the winter of 1953-1954, Churchill asked Washington to amend the Atomic Energy Act so as to permit more sharing of nuclear weapons information with the U.K. The British Embassy in Washington was

\textsuperscript{121} According to Simpson, Churchill saw the "independent project not as an end in itself, but as a means to the reintegration of the nuclear projects of both countries, if necessary, through the sacrifice of many of the independent elements in the British project. He was prepared to forego a capability for the national manufacture of nuclear weapons if this furthered Anglo-American security interests." See \textit{The Independent Nuclear State}, 77.

\textsuperscript{122} Dean Acheson, \textit{Present at the Creation: My Years in the State Department} (New York, 1969), 314-321; Simpson, \textit{The Independent Nuclear State}, xvii. Within a few days of a telegraphed request from Clement Attlee, Prime Minister Robert Menzies agreed to the use of Australian locations for the British bomb tests, but apparently there was no formal consultation between the two countries. Menzies' public announcement was vague regarding time and location and he did not mention that he had been told by the British that the islands would be badly contaminated and out of bounds to the local pearl fishing industry for at least three years. See Blakeway and Lloyd-Roberts, \textit{Fields of Thunder}, 8, 57.

\textsuperscript{123} Blakeway and Lloyd-Roberts, \textit{Fields of Thunder}, 43. The United States exploded its first hydrogen bomb a month after the Monte Bello test, followed by the Soviet Union in August 1953.
not sanguine, however, that "a suspicious and protective" Congress would revise this legislation.\textsuperscript{124} In addition, the Chairman of the AEC, Lewis Strauss, and the General Manager of the agency, Kenneth Nichols, were known to be hostile to the earlier British attempts to gain greater U.S. cooperation.\textsuperscript{125} In February 1954, Eisenhower proposed amendments to the McMahon Act in a message to Congress.\textsuperscript{126} These amendments were rather limited, calling for widened cooperation with the NATO allies in "certain atomic energy matters," and they did not meet the needs of the U.K. As Sir Roger Makins explained from the American Embassy in Washington, "even if the amendments were to go through Congress without mangling ... we do not see much in it for us .... It is only in design and production of atomic weapons that we really need information and this field is clearly barred from the scope of the [President's] proposed amendments."\textsuperscript{127} When the amendments did get through Congress, it was clear that they permitted little change in the existing situation. The new amendments did not allow any interchange of nuclear design information with the Allies.\textsuperscript{128}


\textsuperscript{125} Simpson, \textit{The Independent Nuclear State}, 88.

\textsuperscript{126} Form Letter from the State Department to Miss Earle, April 20, 1954, DSRG 59, 711.5611/4-154, NA, Washington.


As a result of the lack of cooperation from the U.S., Churchill's Cabinet began to seriously consider the development of a British thermonuclear bomb in 1954. At the same time that this was under consideration, however, the government was faced with serious domestic opposition when anti-testing sentiment began to grow after the Fukuryu Maru incident. Throughout the spring of that year, Churchill was under constant attack from the press and the Labour opposition in the House of Commons for his support of nuclear testing. On March 30, before a packed House, the prime minister faced at least eighteen questions related to British and American tests. Expressing their alarm about the nuclear explosions, some members of the House urged Britain and the other nuclear powers to postpone or cancel their testing programs. Others asked Churchill to approach the U.S. and Russia to obtain more information about the nature and impact of their tests.129

As John Simpson points out, this domestic pressure placed the British government in a dilemma. On the one hand, the Cabinet believed that the U.K. should have its own H-Bomb in order to maintain its status as a world power; but on the other, it had to take into consideration the "irresistible domestic and international pressures" in favour of a halt to all nuclear

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129 One member asked what steps the prime minister was taking "to obtain reports and get permission for scientific investigations to be conducted by British representatives on the spot [in the Pacific], in view of the relevance of these matters to the disposal of radioactive and similar substances from atomic plants established, and being established, in Cumberland, the north of Scotland and elsewhere in the U.K.?" See "Parliamentary Questions," March 30, 1954, FO371/110695, PRO, Kew.
testing.\textsuperscript{130}

On March 29, in a statement addressing the concerns raised by the Opposition, Churchill responded that the British government had no power to stop the American testing program and that he himself doubted whether he had "any right to ask that it should be stopped." Indeed, he felt that it would be very foolish to make such a request since "the experiments which the Americans are now conducting in the Pacific are an essential part of the defence policy of a friendly power without whose massive strength and generous help Europe would be in mortal peril." In reply to the suggestion that he get more information from Washington, Churchill said that he was in close touch with Eisenhower and was trying to obtain more facts but that the McMahon Act prevented the American government from divulging any secret information about the nature of these tests to other countries.\textsuperscript{131} Churchill's answers did not satisfy many of his critics, however. A London correspondent for the \textit{Times of India} suggested that the prime minister's statement reflected his "feelings of political impotence ... in the face of the United States' determination to proceed with tests."\textsuperscript{132}

\textsuperscript{130} Simpson, \textit{The Independent Nuclear State}, 96.

\textsuperscript{131} Churchill's draft statement is found in FO371/110695, March 1954, PRO, Kew. Information about the questions and answers in the House also appears in a telegram from Winthrop W. Aldrich, the American Ambassador in London to the Department of State, March 30, 1954, DSRG 59, 711.5611/3-3054, NA, Washington.

\textsuperscript{132} Telegram from the U.K High Commissioner in India to the Commonwealth Relations Office, Foreign Office, London, April 3, 1954, FO371/110695, PRO, Kew.
Privately, the prime minister found the American position on tests frustrating. In a secret telegram to Eisenhower, on the same day that he made his statement to the House, he emphasized the political difficulties that he was encountering at home as a result of both British and American tests. Although he was well aware of the obstacles that Eisenhower faced in any efforts to disclose more information to the British, Churchill explained that it would be helpful if he could tell his critics that he had worked out some sort of cooperative agreement with Eisenhower regarding testing. Although British instruments had detected the second American test on March 26, London had received no information from Washington about this or any of the other U.S. experiments. Churchill requested that Washington, within the limits of the McMahon Act, provide a report on the test. He also assured Eisenhower that he would "of course repulse all suggestions -- and there are many -- that we should protest against the continuance of your experiments." 

On April 6, the American Ambassador in London, Winthrop W. Aldrich, reported that the debate over Britain's nuclear policy was developing into a "highly partisan controversy." Attempting to regain some political ground, Churchill tried a new tactic: he blamed the Americans' lack of cooperation on the postwar policies of the Labour Party under Clement Attlee, arguing that although there was substantial atomic cooperation between himself and the American government during the war, the Labour Party had

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abandoned this stance when it came to power in the summer of 1945. In an attempt to account for this rather desperate, "out of the blue" attack on the Labour Party, Aldrich suggested that Churchill was probably motivated by the continual goading from the left that he take a stronger stand vis-à-vis the U.S. and that he demand closer consultation with the Americans on atomic matters. More generally, what lay behind Churchill's attack, the ambassador thought, was "a sense of frustration and injured pride, shared by many people in the U.K., that world leadership now lay with Washington and Moscow and that the U.K. could not sway the course of events decisively in the postwar world." ¹³⁴

Perhaps in an attempt to regain some control over this course of events, the prime minister met with Secretary Dulles in London on April 12. Among the various topics that they discussed were relations with the Soviet Union and the possibility of a nuclear test ban. By this time, Churchill had become a strong advocate of a big power summit as a means of possibly improving relations with the Kremlin in the wake of Stalin's death. According to the brief record of this dinner meeting, he argued that it might be possible to affect Soviet behaviour through peaceful means. He "repeated the theme that the Russian people wanted a better life with more diversion and that if we cater to this, we would give them more of a vested interest in peace." Although he realized that good economic relations had not always

resulted in peace, the British leader thought that it was worthwhile to consider this approach, albeit within limits. Since Churchill was also concerned about the impact that nuclear testing was having on domestic politics, he spoke approvingly of the idea of a possible moratorium on testing, especially the large hydrogen bomb experiments.\(^{135}\)

When the U.S. National Security Council met on June 23 to discuss Nehru's proposal, it noted the U.K.'s "solid interest in a hydrogen bomb moratorium" and predicted that "Churchill will probably raise the question during his [planned] visit to Washington" in June.\(^{136}\) The NSC also discussed further requests made by Britain for more cooperation in the exchange of nuclear weapons information. CIA Director Allen Dulles believed that another amendment to the Atomic Energy Act "would meet some of the British complaints on this score." Eisenhower, who expressed sympathy with the British position, agreed that additional modification of the law was desirable.\(^{137}\)

Prior to his trip to Washington, Churchill's Cabinet held a meeting to discuss the possibility of going ahead with the British H-Bomb project.\(^{138}\) On June 25, the prime minister met

\(^{135}\) Memo of conversation, April 12, 1954, Dulles-Herter Series, Folder: Dulles, April 1954 (2), AWF, DDEL, Abilene.

\(^{136}\) Memo for the Executive Secretary, National Security Council, June 23, 1954, NSCRG 273, NA, Washington.

\(^{137}\) Meeting Minutes, June 23, 1954, NSC Series, Folder: 203rd meeting of the NSC, AWF, DDEL, Abilene.

with Eisenhower in Washington. Although the record of this
conversation is rather brief, it does reveal something about the
British-American nuclear relationship. When the discussion
turned to atomic matters, the president did not make any concrete
concessions but he did suggest that Lord Cherwell (Churchill's
main scientific advisor) should tell Strauss what the U.K. wanted
in the matter of exchange of information. When the conversation
touched on the possibility of a moratorium on thermonuclear
tests, Eisenhower emphasized the difficulty in producing a
foolproof detection system and his concern that some powers
(presumably the Soviet Union) would be able to conceal their
tests. In the light of these difficulties, there "appeared to be
general agreement" at the end of the meeting that a moratorium
would be unwise. 139

Finding Eisenhower uninterested in a moratorium, Churchill
decided that Britain should go ahead with its own H-Bomb program,
despite the widespread opposition to testing in the U.K. and
elsewhere. In early July, the prime minister told his Cabinet
that "We could not expect to maintain our influence as a world
power unless we possessed the most up-to-date weapons." 140 On
July 26, the Cabinet confirmed the decision. 141

International and domestic opposition to the British and

139 Memo of Conversation, June 25, 1954, International Series,
Folder: Churchill Visit, AWF, DDEL, Abilene.

140 Blakeway and Lloyd-Roberts, Fields of Thunder, 144.

141 Simpson, The Independent Nuclear State, xix. The
government did not mobilize resources for the project until after
February 1955 when the public announcement was made.
American tests did not dissipate. In October, Arthur Henderson, a Labour representative in the British House of Commons, asked the prime minister whether he would propose a suspension of all nuclear explosions to President Eisenhower and Soviet Premier Georgi Malenkov. Deflecting the question, Churchill stated that "it is in the UN that a solution should be sought." At "present," he was not persuaded that Henderson's suggestion would resolve the problem. Pressing the issue further, Henderson then asked the prime minister if he would agree that the "suspension of nuclear explosions would greatly lessen the suspicion and mistrust which exists and which were making the achievement of a disarmament agreement so difficult?" Churchill responded, rather awkwardly, that "I am not convinced that the cessation ... of these explosions would best be advanced by our intervention or by my personnel at the present time."142

By the end of 1954, Churchill found himself in a very difficult position regarding Britain's nuclear policy. Unsure about the likelihood of improved cooperation with the United States, and hoping to maintain Britain's status as a world power, he approved the decision to go ahead with the hydrogen bomb project. At the same time, however, he faced increasing pressure from the public and the Opposition to cease testing. His repetition of the words "at the present time," in answer to the questions raised in the House, suggest that he was not ruling out the possibility of a moratorium on testing in the future.

In addition to complicating politics in the U.K., American and British nuclear tests had other international implications. After the *Fukuryu Maru* incident, relations between Japan and the United States steadily worsened, despite the Eisenhower administration's attempts to downplay the damage caused by U.S. tests in the Pacific. Throughout the year, opposition to nuclear explosions and their harmful effects mounted in India, the Marshall Islands, France, and Canada. Although support for a moratorium grew in these different parts of the world, the Eisenhower administration, supported by domestic opinion, remained firmly committed to nuclear testing, justifying the continuation of the program by the need to protect the security of the United States and the rest of the "Free World".
Chapter Three
DEBATING A MORATORIUM IN THE EISENHOWER ADMINISTRATION

Despite the growing international support for a moratorium, the U.S. remained committed to its nuclear testing program in 1954. As a result of the political problems caused by the Fukuryu Maru incident, some members of the Eisenhower administration, like Secretary Dulles, recommended that the United States at least consider the proposal put forward by the Indian government in April 1954. As a result, the president directed the relevant bureaucracies to consider the advantages and disadvantages of a moratorium. Whereas the State Department recognized that some political advantages might be gained from such a proposal, the Atomic Energy Commission and the Defense Department were adamantly opposed, on the grounds that more testing was necessary to build up a strong deterrent against the Soviet "threat". Although he acknowledged the dangers involved in proceeding with an uncontrolled arms race, Eisenhower concurred with the arguments made by the defence bureaucracies in favour of the continued testing of nuclear weapons.

Prior to the beginning of the "Castle" series in the Pacific, an AEC Commissioner named Thomas Murray argued in favour of a modification of the U.S. testing program.¹ On January 4,

¹ A successful engineer and business executive, Murray had been president of his own company, board member of several large
Murray wrote to the president regarding the possibility of an observer program at the upcoming Pacific tests. Earlier, Murray had suggested to the other members of the AEC that an invitation to the United Nations to send an observer to one of the tests would add strong impetus to the president's "Atoms for Peace" proposal (presented to the UN in December 1953) and perhaps "modify America's present course in atomic matters." In his view, such an invitation would help demonstrate the "complete good faith" of Eisenhower's UN proposal and "at the very least would put the USSR to psychological disadvantage if it was not prepared to match such an offer." Although the rest of the AEC commissioners did not welcome Murray's proposal and they voted against it, the proposal went forward to the president for a decision.2

It is noteworthy that Eisenhower turned to Lewis Strauss for assistance in replying to Murray's proposal because he was "unsure" about its security implications and "uninformed" about the character and nature of the forthcoming tests.3 In a draft reply to the proposal, subsequently adopted by Eisenhower, the AEC Chairman stated that the president "did not wish to intervene in the decision reached by the majority of the Atomic Energy

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corporations, and trustee of several banks, before being appointed to the Commission in 1950. See Richard Hewlett and Jack Holl, Atoms for Peace and War, 1953-61 (Berkeley, 1989), 13.

2 Memo from the AEC to the President, January 4, 1954, Administration Series, AWF, Folder: AEC 1953-54 (5), DDEL, Abilene.

Commission ... particularly since the majority included the Chairman of the Commission." The message also contained a direct reprimand of Murray who was advised that in future the privilege of appeal to the president against a majority decision by the AEC should only be used with "restraint." Accordingly, Murray was informed that "Unless issues involve either some basic principle or the public safety, it would obviously be impossible to cope with the situation if the many commissioners in the independent agencies of the government appealed their minority positions directly to the president." This exchange of memos demonstrates how intolerant Strauss was of any dissent in his agency; it also shows how reliant Eisenhower was on the AEC head. By allowing Strauss to make the decisions regarding this matter, the president strengthened the chairman's grip on the commission and his role as a principal advisor to the White House on issues related to testing and national security.

Undeterred, Murray continued to ply the president with suggestions about modifications in the testing program. On February 5, he wrote a letter favouring an international agreement to halt the testing of large scale nuclear weapons. The negotiation of such an accord, he asserted, might lessen world tensions and make other agreements possible. In addition, Murray pointed out that because it was very difficult to keep full-scale testing secret, a breach of such an agreement would be easily detectable without an elaborate verification and

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inspection scheme. Although Murray recognized that it was not feasible to cancel out the atomic past, he suggested that an international moratorium on testing would have several positive effects on the developing arms race. A moratorium would prevent the future development of much larger yield weapons and might lead to other accords. It would also freeze the American atomic advantage over the Soviets. Murray acknowledged that it was probably "untimely" for him to present such ideas on the eve of the "Castle" series of American tests in the Pacific but he hoped that the president might take his ideas into consideration during any future international meetings on atomic energy.⁵

Eisenhower's response to Murray's suggestions was unencouraging. The president felt that an attempt to negotiate a treaty with the other nuclear powers for the mutual discontinuance of atomic and hydrogen tests would undoubtedly fail because such an agreement "would, of course, depend for its effectiveness upon the observance of compacts by the Soviet government, and experience had not provided any encouragement for that degree of reliance." In other words, an agreement was impossible because the Soviets could not be trusted. Eisenhower promised, nonetheless, that he would take up the subject with Secretary Dulles and Chairman Strauss.⁶

Eisenhower's cool response to the moratorium idea came only

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a week after he approved a stepped-up thermonuclear program at a meeting attended by Strauss, Admiral Arthur Radford, Chairman of the Joint Chiefs of Staff, Joseph M. Dodge, Special Assistant to the President, and General Robert Cutler, Special Assistant to the President for National Security Affairs. During this meeting, Strauss gave his support to a new position put forward by the Joint Chiefs of Staff and the Defense Department regarding the U.S. nuclear weapons program. According to these agencies, a major revision of the weapons program was necessary to insure that the United States maintained its superiority over the U.S.S.R. The production of thermonuclear weapons, they contended, was the cheapest method to obtain both high yield weapons and improved destructive capability. Less cost was involved in shifting the emphasis to producing large numbers of thermonuclear weapons than in increasing production of fissionable weapons. Based on such arguments, the JCS had sent the AEC a revised estimate of military requirements and the commission had subsequently concluded that it was possible to meet the JCS goals for the American thermonuclear arsenal by July 1, 1956.7

Eisenhower's own thoughts about the JCS' program are not recorded, but he did give his consent. It was little wonder,

7 The AEC estimated that the construction portion of this revised program would cost approximately $360 million for Fiscal Year 1955, plus an increased operating cost of $75 million. See Memo, February 6, 1954, Operations Coordinating Board Series, Subject Subseries, White House Office, Office of the Special Assistant for National Security Affairs, WHOSANSA, Folder: Atomic Energy - Miscellaneous, DDEL, Abilene.
therefore, that Murray's moratorium proposal left him unmoved. Convinced that the Soviet Union could not be trusted, the president was wary of any limitations on nuclear arms without a foolproof inspection system.8 Furthermore, he knew that the AEC, DOD, and JCS would not accept any agreement to limit testing since it would necessitate a limitation on their "revised" nuclear weapons buildup.

On April 5, as a result of the international and domestic anxieties caused by the Fukuryu Maru incident, Sterling Cole, Chairman of the Joint Committee on Atomic Energy, asked the president to consider making a statement that the United States would not test any nuclear weapons larger than those it already possessed. Deciding not to take this advice, Eisenhower instead gave a speech that night assuring the American public that hydrogen weapons were not a "great threat" to the U.S. since the power of the U.S. nuclear deterrent would probably prevent the Soviets from attacking. Nevertheless, he warned that "since insanity still exists, I will again say that there is an element in that [Soviet] threat that we must calculate very coldly and very carefully."9

The Eisenhower administration also tried to gain European support for the "New Look." After negotiation, NATO had adopted

8 On January 16, 1954, at a meeting with Secretary Dulles and Chairman Strauss, the president had "staunchly" argued that no disarmament agreement with the Russians could be effective without a "foolproof" inspection system. See Hewlett and Holl, Atoms for Peace and War, 215.

MC 48 which firmly placed its defence policy on a nuclear basis. However, public opinion in Western Europe was increasingly skeptical about the need for such a strategy against the U.S.S.R. After Stalin's death, the Soviet government had launched a "peace campaign" designed to improve relations with the West. According to Robert Wampler, this shift in Soviet foreign policy "created difficulties for NATO governments in convincing their peoples that significant efforts still needed to be made in support of NATO defence."

In an effort to bolster popular support for the American nuclear weapons program in the United States and in Western Europe, the secretary of state wrote an article for the April issue of *Foreign Affairs* re-emphasizing the "New Look" strategy and the need to maintain the Western deterrent in the face of the Russian "menace." Since there was "no evidence that basic Soviet policies had changed with the passing of Stalin," according to Dulles, it was imperative for the "free world" to devise a better strategy for its defense, based on its most effective assets -- air and naval power and nuclear weapons. Such weapons had a dual purpose: they were "suitable not only for strategic bombing but also for extensive tactical use." Consequently, they were a powerful deterrent to any aggression. For the deterrent to be effective, however, the "main reliance had to be on the power of

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the free community to retaliate with great force by mobile means at places of its own choice."\textsuperscript{12}

Lewis Strauss included similar themes in a speech at the Los Angeles World Affairs Council on April 19. Like Dulles, Strauss stressed the Soviet "threat". The United States had to continue testing, he argued, so that it could develop a powerful nuclear force capable of neutralizing the "great Soviet manpower and their atomic weapons potential." If the Americans failed to do this, he warned, the Russians would exert their authority over smaller, adjacent nations, and eventually, the entire world would end up in the "maw of Communism and slavery."\textsuperscript{13}

On April 23, the secretary of state stressed the need for the "New Look" strategy during a secret meeting with the NATO foreign ministers in Paris. Prior to this conference, the American ambassador to France had informed the State Department that public opinion in Western Europe was "now bitterly demanding the cessation of tests."\textsuperscript{14} As before, Dulles emphasized the "threat" posed by the U.S.S.R. The principal danger, he asserted, lay in the "great concentration of military power within the Soviet Bloc combined with the imperialistic, aggressive intent of the Soviet rulers." The vast array of Communist military forces could "strike in any one of many


\textsuperscript{14} Divine, \textit{Blowing on the Wind}, 24.
directions against any one of many countries." This huge military force, combined with the large population of the communist countries, meant that the "free world" would have great difficulty in matching the non-atomic military strength of this bloc. The American government and its allies had to place greater reliance upon nuclear weapons, therefore, to compensate for the "great numerical disparity" between NATO and Soviet Bloc conventional forces.

Although the "free world" would reject any resort to "preventive" war, Dulles declared, the U.S. had to assume that the "Soviet rulers would make use of atomic weapons with maximum surprise ... whenever they considered it to their advantage to do so." This danger, combined with the disparity in conventional forces, meant that the United States had to be prepared to use nuclear weapons. Indeed, Dulles even suggested that these weapons should be treated as "in fact having become 'conventional.'" In the face of the Communist "threat," the ability to use atomic weapons as "conventional weapons" was essential for the defense of the NATO area. It should be agreed NATO policy, that in the case of either general or local war, "to use atomic weapons as conventional weapons against the military assets of the enemy whenever and wherever it would be of advantage to do so."\(^{15}\)

The statements made by Dulles and Strauss contained themes

\(^{15}\) Statement made by Dulles at the secret session of the North Atlantic Council Meeting, April 23, 1954, DSRG 59, 711.5611/5-1854, NA, Washington.
commonly used by American policymakers in order to justify the increasing reliance on testing and the development of nuclear weapons. In the late 1940s, as the bomb came to play an increasingly large role in U.S. defence strategy, American officials had often emphasized the inferiority of NATO’s conventional forces in their public statements. Usually, they alleged that the Soviet bloc had a force of 175 divisions whereas NATO had only 10. As Matthew Evangelista points out, however, the official estimates neglected to distinguish between division strength and actual manpower. Whereas Western division strength ranged from 16,000 to 18,000 men, Soviet division strength was much smaller, ranging from 9,000 to 12,000 men. The frequently cited figures also failed to take into account the demobilization of the armed forces that occurred in the Soviet Union in the postwar world: from 11 million in 1945 to approximately 3 million three years later. In the Foreign Affairs article, Dulles seemed to ignore this demobilization when he argued that the "Red Forces" numbered about ten million. According to Samuel Wells, the Red Army was expanded somewhat after NSC-68 but it never reached the high number quoted by Dulles.

16 The Soviet divisions also lacked the extensive logistical and support services of the Western divisions. In addition, the Soviet forces were severely lacking in other important components of military capability, such as transportation and equipment. Half of the transport of the standing army, for example, was still horse-drawn in 1950. See Matthew Evangelista, "Stalin’s Postwar Army Reappraised," International Security, no. 3, VII (Winter 1982/3) 117, 120-1.

Newly declassified documents also show that U.S. intelligence viewed the Soviet Union as a much more cautious power than suggested in the public statements made by the American administration in 1954. The assumption running throughout the intelligence reports of the early 1950s is that, while the U.S.S.R. would use every effort to extend its influence, it would not do so in areas or ways that could escalate into general war with the West. In contrast to the alarmist rhetoric found in NSC-68, the Central Intelligence Agency concluded in August 1951 that the Soviet Union would not deliberately initiate a nuclear war against the West if at all avoidable.\(^1\) A similar intelligence report submitted on October 20, 1953 argued that the U.S.S.R. had neither the capability nor the intention to attack the United States with nuclear weapons. Since the Soviet bombers, the TU-4s, were only capable of one-way, suicide missions, it was highly unlikely that the Russian leaders would take this kind of risk. Even if they had the capability, the report concluded that a Soviet air attack against the United States was not an imminent possibility. Because the Soviet Union had a historical precedent of "cautiousness," it would prefer to achieve its objectives by means other than a

\(^1\) According to Scott Koch, this conclusion was found in a landmark estimate, NIE 25, "Probable Soviet Courses of Action to Mid-1952," August 1952. See Selected Estimates of the Soviet Union, 1950-59, ed. Scott A. Koch (Washington, 1993), 163. Although this particular document is not included in Selected Estimates, four similar ones are. See, for example, NIE 48, "Likelihood of the Deliberate Initiations of a Full-Scale War by the U.S.S.R. and Its Western Allies Prior to the End of 1952," in Selected Estimates, 189-196.
surprise atomic attack. Another intelligence estimate, submitted about a week later, argued that the U.S.S.R. would continue using "static pressure" rather than any surprise attack against the United States. Like the other reports, this one noted the "peculiar caution and patience" in Soviet strategy. 

Prior to Secretary Dulles' public pronouncements on the Soviet "threat" in April 1954, an additional intelligence report concluded that the Kremlin would "avoid courses of action which ... would clearly involve substantial risk of general war."  

Thus, in early 1954, the Eisenhower administration possessed several intelligence reports which contradicted its public pronouncements regarding the Soviet "menace". These documents clearly show that the intelligence community was not expecting the Soviet government to make any moves, especially a surprise atomic attack, which would risk general war with the United States or its Allies. Of course, it is conceivable that neither the president nor the secretary of state ever saw these reports. However, it is more likely that policymakers like John Foster

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20 Report by the Joint Intelligence Committee to the JCS, "The Magnitude and Imminence of the Soviet Air Threat to the United States," October 29, 1953, JCSRG 218, Folder: Intelligence RE: Estimates of Soviet Intentions and Capabilities, NA, Washington. In similar reports written in early and late 1953, the British Chiefs of Staff concluded that there was little chance that the U.S.S.R. would deliberately initiate a war with the West. See Wampler, "Ambiguous Legacy," 548.

Deliberately exaggerated the Soviet threat because it served the administration's purposes to do so. By instilling these frightening images in the public mind, the administration knew that it would have a better chance of getting support for a military policy that placed an increasing reliance on the testing and development of more numerous and deadly nuclear weapons.

As Brands points out, John Foster Dulles seemed to have ambivalent feelings about national security policy during the early years of the Eisenhower administration. In his public statements, the secretary of state used vehement anti-Soviet rhetoric to get domestic and foreign support for the "New Look" strategy. In 1953, however, he had sent a memo to the president, suggesting the possibility of a negotiated agreement with the Soviet Union regarding the limitation of conventional and nuclear arms. And after the Fukuryu Maru incident, he began to have doubts about the U.S. testing policies because of the negative international response. During a meeting of the National Security Council on April 6, 1954, the secretary of state passed a handwritten note to the president stating his opinion that "I think we should consider whether we could advantageously agree to Nehru's proposal of no further experimental explosions." To this rather radical proposal, Eisenhower responded in his usual

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manner, by deferring the question to the Chairman of the Atomic Energy Commission. In a hasty note to Dulles, the president replied "Ask Strauss to study."\(^24\)

Later, on May 6, the secretary of state reported to the National Security Council that he had discussed the possibility of a nuclear test moratorium with British Foreign Secretary Eden during a recent trip to London. Dulles reflected that the United States ought to favour a moratorium on the grounds that the "Castle" series had placed the Americans well ahead of the Russians in nuclear weapons development.\(^25\) Other members of the administration also had reservations about the American testing program. On May 12, Arthur S. Flemming, the Director of the Office of Defense Mobilization (ODM), urged the president to consider the Indian proposal for a moratorium on tests. He argued that such a move might "represent the exercise of spiritual leadership for which the world is hungry." It was a calculated risk that the U.S. could afford to take since the initial proposal would have to be general and if, during negotiations, American intelligence sources "indicated that we were taking too great a risk, the U.S. would still have time to introduce safeguards."\(^26\)

CIA Director Allen Dulles was also inclined to favour a moratorium, based on his own evaluations of how the communist and

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\(^26\) Memo from Flemming to the President, May 12, 1954, Dulles-Herter Series, AWF, DDEL, Abilene.
non-communist worlds would react to U.S. acceptance of the Indian proposal. According to his intelligence, the "immediate reaction of the great majority of the governments and peoples of the non-communist world would be one of approval and support for any world-wide moratorium on nuclear tests." The governments of most of the NATO allies would not only favor such a proposal, he believed, but would privately urge the U.S. to accept it. As for the Russian leaders, they would "probably signify their general approval of the objectives of the proposal as being in line with their 'desire' to ban nuclear weapons although they probably would not commit themselves to its acceptance or rejection." Soviet approval would stem from the belief that, in general, numerous weapons tests were more important to the U.S. nuclear weapons program than they were to theirs. The Kremlin believed that nuclear weapons, especially those intended for strategic use, "played a more important role in Western military strategy than they did in present communist strategy." Dulles predicted that the Soviet Union would either accept a moratorium or put forward a counter-proposal advocating the abolition of all nuclear weapons. He cautioned the National Security Council that the "reaction of the Kremlin would be conditioned by the nature of the U.S. reaction to the Indian proposal."27

Due to the combination of internal and external pressures in favour of a moratorium, the president advised the NSC to consider the question by seeking the opinions of the relevant

bureaucracies. Not surprisingly, the Joint Chiefs of Staff, the Atomic Energy Commission, and the Federal Civil Defense Administration were all firmly opposed to any halt to testing. In a memo to the National Security Council, the JCS laid out the reasons for their opposition. If the U.S. agreed to such a proposal, they feared that pressures might then arise for further limitations on the military application of atomic energy. They also doubted that the Soviet Union would "adhere in good faith to an agreement to suspend further tests." Furthermore, they disagreed with those who argued that a moratorium would maintain the American advantage over the U.S.S.R. in thermonuclear weapons development, since it would not prevent the Soviets from advancing "theoretical studies." If such advances occurred, the advantage which the U.S. held "might be neutralized if the U.S.S.R. then elected to violate or abrogate the moratorium agreement and conduct proof tests of their theoretical studies." 29

In addition to these hypothetical concerns, the Chiefs also disputed the political value of an agreement to stop testing, contending that it would be transitory in nature, whereas the military disadvantages would be far-reaching and permanent. Given the assumption that military and technological innovations were more important and long-lasting than political agreements,


29 Memo from Admiral Radford, Chairman of the JCS, to the NSC, May 17, 1954, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.
the JCS concluded that "it would not be to the net advantage of the U.S. to propose to enter into an agreement on the testing of nuclear weapons."30

The Federal Civil Defense Administration also voiced its opposition to a moratorium, emphasizing the importance of testing for civil defense. In coordination with the Department of Defense and the Atomic Energy Commission, the FCDA had already planned "what so far was its broadest and most elaborate participation for the next continental test series." The agency stressed the need for research on the effects of nuclear explosions on typical civilian items, structures and installations. Indeed, "effects testing" was so important that "Congress had given it almost sole recognition in appropriating funds for FCDA research." The organization believed it was important to incorporate other government agencies into the plans for testing, such as the Food and Drug Administration, the Federal Housing Administration, the Public Buildings Service, and the Department of Agriculture and the Forest Service. Participation by private industry should also be encouraged. In the spring of 1953, the Automobile Manufacturers Association, the National Retail Dry Goods Association, the American Institute of Architects, and some major oil companies had all participated in the U.S. continental test series. A number of other interest groups, such as the National Canners Association, the Meat Institute, the Housing and Home Finance Agency, and the aluminum

30 Ibid.
industry, had recently indicated their interest in the next continental series. As the agency pointed out, participation by these interest groups was financially advantageous because it allowed the "FCDA to increase the scope of its test programs by supplementing its own limited funds with industrial sponsorship."

The FCDA had other ideas about how it could expand its role in the testing programs. It proposed that civil defense workers could be "indoctrinated" into the AEC's tests by a program similar to the military's DESERT ROCK exercises, although on a smaller scale. In other words, the agency was recommending that its workers be exposed to radiation by participating in the "atomic bomb maneuvers" carried out by the Army. Participation

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31 These DESERT ROCK exercises took place in the Nevada desert. In DESERT ROCK I, which took place in 1951, "an airborne battalion combat team experienced an A-Bomb burst from a position in the open approximately 7 miles from the aerial explosion." DESERT ROCK IV and V (1952-53) involved "atomic bomb maneuvers" designed to test the "psychological reactions" of 1200 troops who witnessed the detonation of an atomic bomb (placed on a tower) from trenches at a distance of about 4 miles. The purpose of these "exercises" was to provide knowledge which might be useful "if Army troops ever became involved in offensive or defensive atomic warfare." It was hoped that these experiments would have value "not only to the army but also to civilian defense specialists and to scientists interested in human reactions to any conditions of stress arising out of the experience with a new and deadly weapon." As a result of their four hour "indoctrination" before the explosions, the soldiers learned a lot about the injuries associated with atomic bombs, such as "blindness, sterility, impotence and the like." Measures used to gauge the effect of indoctrination on fear (such as sweat tests on the hand and rifle performance tests) showed that "the indoctrination appeared to lessen the worry the troops felt about being on an A-Bomb maneuver." In fact, "no grossly disorganizing fear was observed at any time during the research." See Report written by the George Washington University Human Resources Research Office (operating under contract with the Army), "Desert Rock IV: Reactions of an Armored Infantry Battalion to an Atomic Bomb Maneuver," August 1953, JCSRG 218, Central Decimal File 1951-53, NA, Washington. Similarly, in September 1954, 44,000 Soviet troops took part in an atomic bomb combat exercise at
in these "exercises" would have three beneficial results, according to the agency. First, it would help emphasize the "national aspect" of civil defense by gathering together several hundred civil defense workers from a variety of states and cities. Secondly, it would provide "psychological conditioning" for civil defense leaders. Thirdly, it would provide "a measure of prestige for the civil defense volunteer by demonstrating that the government felt that actual atomic attack training was as important for the volunteer as for his military opposite." 32

Like the FCDA, the Atomic Energy Commission had a special interest in ensuring that the testing program continued. During a NSC meeting on May 27, Lewis Strauss opposed the idea of a moratorium on the grounds that it would be difficult to ensure that the Soviets were not "evading their commitments." When the president asked how accurate the AEC's methods were for detecting the size of a Soviet nuclear test, Strauss responded vaguely that "there was always a considerable difference of opinion and debate [about this question] after the Russians tested one of their nuclear weapons." Dissatisfied with this answer, Eisenhower indicated his general frustration with the negative ideas always being put forward by some people in the


administration. Like the AEC chairman, the president did not want the Soviets to get ahead of the U.S. in thermonuclear weapons; however, he felt that it was "a matter of despair to look ahead to a future which contained nothing but more and more bombs." If the government failed to come up with "more imaginative thinking" regarding this "terrible problem," he warned, the further proliferation of nuclear weapons would occur, where "even little countries will have a stockpile of these bombs, and then we will be in a mess." In response, Strauss reiterated his view that concerns about such proliferation were unwarranted since "it would be quite a long time before the little countries were in a position to manufacture nuclear weapons."³³

Arthur Flemming agreed with the president's general feeling that "somehow or other we must develop something that would give hope to our people." The only NSC member to advocate an alternative to the status quo at this meeting, however, was Harold Stassen, the Director of the Foreign Operations Administration, who suggested that it might be possible to induce the Soviet Union to move toward more peaceful courses of action by non-military means, such as increased trade.³⁴

Secretary Dulles, who took no position on the moratorium proposal at the NSC meeting, indicated that the State Department needed more time to study the matter before making a final

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³³ Meeting Minutes, May 27, 1954, Folder: 199th meeting of the NSC, AWF, DDEL, Abilene.

³⁴ Ibid.
recommendation. Over the next couple of weeks, the department and the NSC received a considerable amount of advice from various bureaucracies, most of which argued against any limitation on testing. Replying to some questions posed by Dulles regarding the Pentagon's position, Secretary Charles Wilson outlined the reasons why the U.S. testing program should remain uncircumscribed. With regards to the reliability of detection methods (of tests conducted by other countries), he responded vaguely, much as Strauss had, that "the best estimates by our own scientists are at wide variance." With respect to the possibility of putting a limit on the upper yield tests, the Defence Secretary contended that such a limitation would not be to the technical advantage of the U.S. Based upon the best scientific advice available, he argued that:

until an acceptable formula for the elimination of nuclear weapons from the armaments of all nations could be devised and implemented, the security of the U.S. depended in a large measure upon continued and intensive applications of our scientific, engineering and industrial capacities in this [thermonuclear] field without being circumscribed as proposed.\textsuperscript{35}

Wilson concluded that the technical disadvantages of a moratorium would outweigh any political or propaganda benefits flowing from it. In addition, he assured Dulles that "with the experience of the recent tests behind us our scientists believe that we can so govern the magnitude and nature of future explosions as to avoid the risk of seriously harmful effects on others."\textsuperscript{36}

\textsuperscript{35} Memo from the Secretary of Defense Department to the Secretary of State, June 4, 1954, NSCRG 273, NA, Washington.

\textsuperscript{36} Ibid.
As Dulles reflected on the Defense Department's negative appraisal, the Joint Chiefs of Staff provided the NSC with estimates regarding future Soviet nuclear capabilities. While predicting that the U.S. would still have more atomic firepower than the U.S.S.R. in 1957, the JCS warned that the Soviets would have by then attained a massive capability to damage the U.S. and that by 1958, they might have an intercontinental guided missile equipped with a thermonuclear warhead. Such a breakthrough in missile development might encourage the Soviet Union to force a "showdown" with the U.S. The Defense Department was devoting maximum effort to develop a defense against this "threat" -- but to no avail as yet.37

Thus, even though they believed that the Soviet Union would "catch up" in the arms race (possibly as early as 1957), and even though they realized that it would be very difficult (perhaps impossible) to devise the technical means to defend the United States against intercontinental ballistic missiles, the JCS and the Defense Department continued to oppose any political agreement which might limit the testing and development of nuclear weapons, on the grounds that such an agreement might put the U.S. at a "technical disadvantage."

Occasionally, some members of the administration indicated that they were cognizant of the political problems that the American testing policies presented. For example, although JCS Chairman Arthur Radford could see no alternative to a

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37 Estimates by the JCS, June 3, 1954, NSC Series, Folder: 200th Meeting of the NSC, AWF, DDEL, Abilene.
continuation of the testing program, during one NSC meeting he did admit that, "unhappily," the U.S. government found itself in the "awkward position of being unable to explain to our friends and allies why we feel it necessary to go on testing these weapons."  

The most vociferous opposition to a moratorium came from the bureaucracy most interested in the continuation of testing -- the Atomic Energy Commission. In a memo to the Secretary of State dated June 16, Chairman Strauss conveyed the views of the majority of the AEC. Strauss began from the premise that testing was essential to nuclear weapons development. Although a moratorium would also impede Soviet progress in this area, it would be more disadvantageous to the Americans, because while the latter would "rigorously" observe any agreement, the Russians undoubtedly would circumvent or "openly violate it" if it served their purposes to do so. According to Strauss, it was of great importance that the AEC resume testing again as soon as possible to perfect a small megaton weapon for anti-aircraft defense. Although still in a primitive stage, the development of such a weapons system was considered "almost indispensable" by the AEC.

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38 Meeting Minutes, May 27, 1954, Folder: 199th Meeting of the NSC, AWF, DDEL, Abilene.

39 Commissioner Thomas Murray, who dissented from the majority, presented his opinions separately.

40 Memo from Strauss to the Secretary of State, June 16, 1954, Executive Secretary's Subject File Series, Folder: #20 Moratorium on Tests(1), WHO, NSC Staff: Papers, DDEL, Abilene.
and the JCS. Strauss concluded that a dependable agreement with the Soviet government was an "illusory" goal. Nevertheless, if it became politically necessary for the U.S. government to propose some kind of accord, he preferred a proposal in favour of complete disarmament. Recognizing that such a proposal had no possible hope of success, Strauss nonetheless believed that it would have the greatest propaganda value.

AEC Commissioner Thomas Murray, while in general accord with the majority viewpoint, diverged from his colleagues on several points. First, he emphasized the possible psychological value that an American proposal to limit large-scale testing would have, even if the U.S.S.R. rejected the offer. Secondly, he stressed that an agreement to suspend megaton tests might slow down or halt the development of these weapons by the Soviet Union. Thirdly, Murray suggested that such an agreement could be adequately policed by long range detection techniques which would not interfere with national sovereignty. Close range observers would be unnecessary because it was easy to identify large explosions (e.g., fifty KT and above) from a distance. In addition, a limitation on large tests would be to the overall advantage of the U.S., which was already ahead of the Soviet Union in this area and was not planning any megaton tests for about two years anyway. And the U.S. could continue its

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41 Meeting Minutes, June 23, 1954, NSC Series, Folder: 203rd meeting of the NSC, AWF, DDEL, Abilene.

42 Memo from Strauss to the Secretary of State, June 16, 1954, Executive Secretary's Subject File Series, Folder: #20 Moratorium on Tests(1), WHO, NSC Staff: Papers, DDEL, Abilene.
development and testing of the smaller weapons, such as tactical weapons.\(^3\)

Allen Dulles shared some of Murray’s views, observing that the "CIA was inclined to be a little more optimistic than Strauss on the possibility of detecting Soviet violations of a moratorium." In addition, he thought that it would be a good idea for the U.S to adopt a more affirmative position than that favoured by the AEC and the DOD. Secretary Dulles had nothing specific to propose, however, except to suggest the insertion of the words "at this time" in the recommendation that the U.S. would not agree to a testing moratorium.\(^4\)

Given their interests in the continuation of testing, their faith in the value of nuclear weaponry, and their distrust of the Soviets, it is not surprising that the Atomic Energy Commission and the Department of Defense rejected the Indian proposal. What is more difficult to fathom, given the international political problems caused by testing, is the State Department’s ultimate rejection of a moratorium. John Foster Dulles outlined the State Department’s views in a report prepared for the National Security Council. An American offer to agree to a test moratorium would, the secretary acknowledged, measurably improve relations with India and Japan and substantially improve relations with the U.K. It would undoubtedly win the approval of the great majority of

\(^3\) Memo from Murray to Dulles and Strauss, June 19, 1954, NSC Meeting Minutes, Folder: 203rd meeting, NSCRG 273, NA, Washington.

\(^4\) Meeting Minutes, June 23, 1954, NSC Series, Folder: 203rd meeting of the NSC, AWF, DDEL, Abilene.
the governments and peoples of the non-communist world. In fact, such an agreement would probably bring forth a "great sense of relief by people all over the world" who feared that continuing larger and larger thermonuclear testing would result in global catastrophe. Dulles also believed that such an accord would constitute a major propaganda stroke for the U.S. by providing strong evidence against communist charges that the U.S. sought to "terrorize and dominate the world" with nuclear weapons.⁴⁵

Thus, Dulles realized that there would be widespread international political support for a moratorium. Apparently, however, the secretary of state concluded that the disadvantages of an agreement outweighed its international political and propaganda advantages in the summer of 1954. He worried that any American initiative in this area might "imply some admission of fault or some recognition that large-scale testing was illegitimate." He also realized that, if the American government decided in favour of a moratorium, the Soviet Union might then press for the "next step" and repeat its call for the abolition of all nuclear weapons. Should this happen and the Americans refuse, the U.S. government would find itself in an even more troublesome international political situation than at present. In addition, it is also possible that Dulles preferred not to get out of step with Eisenhower since the president was less than enthusiastic about a moratorium. For these reasons, combined with those put forward by the AEC and DOD, Dulles recommended

⁴⁵ Memo from the Secretary of State, June 23, 1954, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.
against a moratorium in June 1954. However, he agreed with Strauss that the U.S. should appropriate the word "disarmament" for use in its "propaganda war against the Soviet Union."  

At the NSC meeting on June 23, Eisenhower vaguely reflected on the need to abolish atomic weapons of all kinds, but in the end he emphatically concurred with Secretary Dulles' recommendation. Sharing the views held by the Atomic Energy Commission and the Defense Department about the need for a strong nuclear deterrent against the "threat" posed by an untrustworthy Soviet Union, the president could see no alternative to continued weapons testing. Consequently, the National Security Council officially adopted the position that the U.S. should not agree to a moratorium. 

Upon making this decision, the administration still confronted widespread opposition to its testing program. In order to deflect world attention away from this program, the AEC recommended in late October that a dramatic public announcement be made regarding the upcoming Soviet series of tests. Secretary Dulles was ambivalent about such an announcement on the grounds that it "would not only increase neutralist sentiment in the free world, but might also convey an impression that the Soviet Union was catching up with the U.S. in the field of atomic weapons."

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46 Memo from the Secretary of State, June 23, 1954, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.

47 Meeting Minutes, June 23, 1954, NSC Series, Folder: 203rd meeting of the NSC, AWF, DDEL, Abilene.

On the other hand, Dulles understood the desirability of shifting anti-testing resentment against the U.S. within the "Free World" to the Soviet Union. In the end, the secretary decided in favour of an announcement, and the president concurred, stating that the "most persuasive argument in favour of an announcement was the fact that the tests could not be kept secret anyway, and that the U.S. should therefore make a virtue out of necessity."

Consequently, the NSC agreed that Strauss should make the announcement.49

Beyond drawing international attention to the Soviet tests, the administration also attempted to explain its decision against a moratorium to the French. In late November, Secretary Dulles gave French premier Pierre Mendès-France an unofficial memo entitled "H-Bomb Experimentation". According to this memo, the principal reason behind this decision was that the "methods of detection and observation were not sufficiently accurate to permit of drawing a maximum explosive limit, violations of which could be proved."50 It was also very difficult to "draw a line and say that it was moral and compatible with the public interest to have explosions that would kill X number of people but not moral or compatible ... to have explosions that will kill X plus 1 persons." In Dulles' view, an agreement to limit testing would "practically expose nations to propaganda which would keep the

49 Meeting Minutes, October 26, 1954, NSC Series, Folder: 219th meeting of the NSC, AWF, DDEL, Abilene.

50 Draft memo of conversation, November 19, 1954, Series III, WHOSAD, DDEL, Abilene.
limit pushed downward to a point which would provide theoretical abolition of atomic weapons without any effective controls.\textsuperscript{51}

This "personal" memo was particularly interesting in two respects. First, Dulles' emphasis on the inadequacies of existing methods of detection appears to contradict one of the reasons for the NSC decision only a few weeks earlier to announce the upcoming Soviet test series, namely (as the president himself argued) that the tests "could not be kept secret anyway."

Secondly, the secretary's focus on the drawbacks of a limited ban - i.e., a ban which would limit the testing of weapons capable of killing "X plus I" - reveals his recognition that an agreement to limit the testing of the most powerful weapons could result in further international pressures to reach a comprehensive accord abolishing all testing. Dulles realized that the ultimate objective of most test-ban proponents was to end all testing. Needless to say, he also knew that this was precisely what the bureaucracies in Washington, notably the Atomic Energy Commission and the Defense Department, did not want. They feared even a partial test ban because this might lead to calls for a complete prohibition.

Thus, the State Department agreed with the DOD and the AEC when they decided against a nuclear test ban. However, this did not mean that Dulles or the State Department shared all of the views of these powerful military bureaucracies. Indeed, top secret reports indicate that the State Department had very

\textsuperscript{51} Ibid.
different ideas about disarmament and testing than did the AEC and DOD.

In the summer of 1954, the NSC had set up an Ad Hoc Committee to review American disarmament policy. In the fall, working groups within the Departments of State and Defense prepared reports for this committee. The State Department's report represented a strikingly radical departure from the commonly accepted views of the AEC and the DOD. Its main premise was that a continuation of the current military trends entailed "serious risks" for the United States. By 1957-59, the Soviet Union would achieve atomic parity with the U.S. As this state of parity came near, the margin of military advantage which the U.S. had over the Soviet Union would progressively diminish. Therefore, the current military trends could not ensure continued security. Indeed, an increasing dependence on the development and use of all types of nuclear weapons increased the risk of total nuclear war. Similarly, a reliance on mutual deterrence was insufficient since this condition was really the "product of haphazard checks and balances which were not subject to exact calculation or verification." Even more importantly, the heavy emphasis on military weapons might result in the neglect of the economic and political measures that were essential for the long-term strength of the "free world." Given that risks attended both the continuation of the present arms race and a new proposal

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52 Parity was defined as "the capacity, despite American superiority in stockpiles and weapons systems, to damage the U.S. so severely that it could not hope to achieve any rational end from war."
for disarmament, the State Department concluded that a "program for progressive control of armaments is both feasible and in the U.S. interest."\textsuperscript{53}

The State Department Working Group understood that an effective system of inspection and verification was central to any nuclear arms control scheme. They realized, however, that even the best inspection system was not foolproof and cautioned against setting unobtainable inspection standards for such a scheme. The group recommended a new, phased disarmament plan which in its first stage would involve the establishment of an inspection and verification system "adequate to reduce the risk of secret violations of the plan to tolerable proportions." Such an inspection scheme would not have to be perfect because its efficiency would increase through the experience of operation. In the second stage of the plan, the parties would agree to cease the production of nuclear weapons materials. The risks involved would not be great since the U.S could keep its stockpile of nuclear weapons and its delivery capabilities and could resume production in the event of Soviet violation of the agreement. During the third stage, a more extensive inspection scheme would be put in place and limitations on nuclear weapons would begin. If this stage of a disarmament agreement occurred before the 1957-59 period, the United States could maintain its nuclear superiority and this would "balance off the Soviet conventional

\textsuperscript{53} "Review of U.S. Policy on Control of Armaments" by the State Department Working Group, NSC Meeting Minutes, November 29, 1954, NSCRG 273, Folder: 236th meeting, NA, Washington."
superiority." Even if put into effect after 1959, the plan might still enable the U.S. to maintain a wide margin over the Soviet Union in numbers of nuclear weapons. Further reductions (in both conventional and nuclear weapons) would possibly take place either at the end of this stage or in a conclusive final stage.\textsuperscript{54}

What hazards did this plan pose? Very few, according to the State Department, since the United States would be "immediately free to take whatever punitive action it deemed necessary" if the agreement was violated. As well; each stage of the plan entailed considerably less risk than simply allowing present trends in the arms race to continue.\textsuperscript{55}

The report submitted by the Defense Department working group (supported by the Atomic Energy Commission) disagreed vehemently with both the recommendations and the conclusions of the State Department report. The members of the Pentagon group assumed that a disarmament agreement offering reliable security was impossible because the Soviet Union could not be trusted not to violate the accord. Until the U.S.S.R. had earned the trust of the U.S. no plan was even worth considering. Only "tangible demonstrations" such as the peaceful unification of Germany could earn such trust. Defense officials preferred an unchecked arms race to an imperfect disarmament plan. Acceptance of such a flawed plan would pose a greater risk to the security of the U.S. than would the achievement of parity by the Soviet Union. In any

\textsuperscript{54} Ibid.

\textsuperscript{55} Ibid.
event, the Department of Defense was confident that the U.S., given its ample resources, would be able to take "dynamic countermeasures" to deal with this approaching parity. The real risk was not the arms race but rather that the American government would fail to act "resolutely" and, as a result, have no choice but to accept an accommodation to "Soviet designs."

The working group also assumed that the Soviet Union lacked a serious interest in disarmament or arms control and would find merit only in an accord that was "highly superficial and highly disadvantageous to the United States." 56

Despite the world-wide support for an agreement to limit testing, the Defense group believed that the administration made the right decision when it decided in June against a moratorium. A continuation of testing was essential because the security of the "Free World" depended in large part upon the U.S. retaliatory capacity. In fact, the U.S. needed to increase its nuclear weapons stockpile in order to compensate for the "superior" conventional forces of the Soviet Bloc. If the U.S. decided to limit its nuclear arms, it would have to concurrently bolster its conventional forces to parity with the Soviet Union, unless it wanted to "invite the over-run of Western Europe and, as a minimum, the seizure of the Eurasian land mass." 57

Unlike the State Department, Defense officials refused to


57 Ibid.
conclude that the U.S. reliance on nuclear weapons was undesirable. Rather, they rejected any limitation on the testing and development of these weapons. Although they admitted that the achievement of a "nominal balance of world military power" might be possible through international control of atomic energy and arms control agreements, they believed that any such achievements would always be "temporary" due to Soviet untrustworthiness. The only sure way to protect the "Free World" and its "fundamental values and institutions," they argued, was through a strong security posture, not through international control of atomic weapons.58

Thus, by the end of 1954 the positions of the AEC and the DOD on disarmament and nuclear testing were clear. Based on distrust of the U.S.S.R. and questionable assumptions about Soviet capabilities, intentions and ambitions, the Defense Department and the Atomic Energy Commission argued that a disarmament agreement was not in the U.S. interest. In their view, continued testing and a buildup of nuclear weapons would protect American security better than any "transitory" political accord which would limit such weapons. Other less influential bureaucracies, like the Federal Civil Defense Administration, supported their position.

The position of the State Department was more complex. In

March of 1954, Secretary of State Dulles had made provocative public statements describing the virtues of a strategy which relied on "massive retaliatory power." However, when world opinion started to turn against the U.S. as a result of the tests which took place in March and April, Dulles encouraged the NSC's decision to consider the April 1954 Indian proposal for a moratorium on testing. Undoubtedly, he was convinced that such consideration was worthwhile, given the intelligence which was provided by the Director of the CIA, his own brother, Allen Dulles. According to Allen Dulles' predictions, the "great majority" of the governments and peoples of the non-Communist and Communist countries would support an agreement to end testing. Despite the compelling international support for such an accord, however, Secretary Dulles fell in line with the rest of the administration and voted against the proposal in the summer of 1954. Nevertheless, State's fall report indicated that there were some in the department who opposed the administration's nuclear weapons policy - a policy which advocated a massive buildup, and continued testing, of these weapons. These differences between the State Department and the military bureaucracies would continue throughout the Eisenhower era.

Although some historians, such as Hewlett and Holl, suggest that the president seriously pursued a nuclear test ban in 1954, there is little evidence to support this perspective. In

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the debate within the administration, Eisenhower sided with the
Defense Department and the Atomic Energy Commission in favour of
continued testing and an arms buildup. Like the leaders of these
bureaucracies, he did not think that the Soviet Union was
trustworthy. In a meeting with legislative leaders on December
13, Eisenhower acknowledged that "Russia was not seeking general
war" but he also emphasized America's vulnerability to attack on
its own territory by Soviet long-range bombers. As a result of
this perceived threat, Eisenhower argued that the U.S. should
beef up its retaliatory forces and its continental defenses.
Although the president was interested in limiting the
conventional military capacity of the U.S., he had no desire to
limit its nuclear force. On the contrary, he argued that the
U.S. needed a military program that could be "carried on
indefinitely."60 Having committed himself to the "New Look"
strategy, Eisenhower agreed with the conclusions reached by the
Although he would back conventional reductions, he refused to
support any policy which would limit the capacity of the American
nuclear retaliatory force. He believed that this atomic force
would act as a deterrent against the perceived Soviet threat,
thereby ensuring national security. In order to improve this
retaliatory capacity, more nuclear testing was required.

Despite international outrage over the previous series, the

60 Meeting with the President, December 13, 1954, Legislative
Meetings Series, Folder: Legislative Meetings 1954, AWF, DDEL, Abilene.
DOD and the AEC planned another test in the Pacific, to be conducted in the new year somewhere in the area 200-600 miles south to south-west of San Diego, California, in order to develop "optimum anti-submarine warfare tactics using atomic depth bombs" as well as defensive tactics against such bombs should the Soviet Union develop them. Eisenhower, without any evident hesitation, gave quick approval to the planned test.61

In 1955, the American government tested nuclear weapons at its proving grounds in Nevada and the Pacific. In order to shape domestic and foreign opinion, the Eisenhower administration deliberately underplayed the health and environmental effects of nuclear explosions. By employing various public relations strategies, devised by the Atomic Energy Commission and the United States Information Agency (USIA), the administration emphasized the benign, peaceful, and defensive nature of American tests. Partly as a result of these efforts to manage public opinion, nuclear testing did not emerge as a domestic political issue in 1955. Nevertheless, in other parts of the world, protest against testing increased. Although the British government aligned its position with that of Washington, public support in the U.K. and other countries, including France, India, and Japan, grew in favour of a moratorium.

AEC Chairman Lewis Strauss continued to play a central role in shaping U.S. nuclear policies. In addition to the considerable authority he derived from his position, Strauss had a close friendship with Eisenhower, sharing with him among other
things an interest in raising Aberdeen-Angus herds.¹ Outside the
government, observers realized that Strauss was becoming the
second most influential decision-maker on atomic affairs within
the administration, after only the president himself. According
to an article in Fortune, he not only had influence as the
chairman of the AEC, but wielded a great deal of power when
"wearing his second hat as special advisor on atomic affairs to
Eisenhower", who had instructed all government agencies in his
administration "to make no move in the atomic field without Lewis
Strauss' say-so."²

Throughout 1955, the AEC's position on testing caused many
political problems for the State Department and U.S. diplomatic
outposts, particularly the embassy in Japan. In January, the AEC
forwarded to the State Department a draft reply to a Japanese
note sent in November 1954 which voiced concerns about past tests
in the Pacific and also asked for reassurances about future
explosions. In its draft response, the AEC made several points.
First, the Pacific site had been chosen because of its
"availability to the U.S. government" and because of its location
in an area "where the likelihood of hazard to personnel would be

¹ See for example, Telephone call from President Eisenhower
to Admiral Strauss, February 23, 1955, DDE Diary Series, AWF,
DDEL, Abilene.

² Duncan Norton-Taylor, "The Controversial Mr. Strauss,"
Fortune 51 (January 1955): 110. In an October 1953 NSC
directive, President Eisenhower insisted that all government
officials who proposed to make public statements regarding
nuclear weapons or their effects had to check in advance with the
AEC chairman. This directive was reaffirmed by the president in
March, 1955. See, for example, NSC Meeting Minutes, March 3,
minimized." Secondly, no test was ever held which did not contribute to the "defence posture of the United States and to the maintenance of world peace." Thirdly, because of security concerns, it would be impossible to notify the Japanese government of the dates on which future tests would take place; like everyone else, the Japanese would have to remain content with the information contained in the general announcements about tests. Lastly, insofar as precautionary measures were concerned, a danger area similar to the one established after the March 1, 1954 detonation would be established and all possible safety measures would be adopted.

Since the AEC's draft reply did not give "sufficient consideration to the unfortunate results of the last test," the embassy in Tokyo feared that it would have an adverse effect on public opinion in Japan.\(^3\) Agreeing, the State Department decided not to send a response at this time. Far from placating the Japanese, State worried that the AEC reply might worsen political relations between the two countries.\(^4\)

Perhaps as a result of the political problems caused by testing in the Pacific, the AEC decided to conduct its next series of tests at the proving grounds near Frenchman's Flat, Nevada. On January 14, the Chairman requested the president's

\(^3\) Telegram from American Embassy in Tokyo to the Department of State, January 26, 1955, DSRG 59, 711.56/1-2655, NA, Washington.

\(^4\) Department of State Instruction from Secretary Dulles to the American Embassy in Tokyo, January 7, 1955, DSRG 59, 711.56/1-755, NA Washington.
approval for these new tests, dubbed Operation "Teacup," to take place from February 18 to May 15. According to Strauss, these tests would assist in the development of small-size, powerful, efficient thermonuclear weapons for air defense and tactical and demolition purposes. What is more, they would provide essential data on the military effects of atomic explosions and on effects for civil defence purposes. Eisenhower agreed, giving his approval on the same day that he received the request.5

Because the planning for this next series was secret, the press continued to speculate about the possibility of a test moratorium. An editorial in the Washington Post attracted much attention among government officials and foreign diplomats in the nation's capital because of its strong case in favour of a self-enforcing ban on further hydrogen weapons tests. While the editorial conceded that there were disadvantages to such a proposal, it concluded that they were far outweighed by the potential benefits, assuming that a workable detection system could be established (a reasonable assumption, given the American ability to pinpoint the time and places of Soviet explosions). Besides serving to get the disarmament discussions off dead center, a ban might curb the development of more threatening nuclear weapons (e.g., the ICBM), could relieve fears about the

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5 Letter to Eisenhower from L. Strauss, January 14, 1955, 00185, NSA, Washington. During the test period fourteen nuclear shots were detonated. Several thousand scientific, military (army, air force, navy, marines) and civilian contract personnel participated in the planning and execution of the test series. Military exercises took place during and following the shots under the name Desert Rock 6. See edit. note, FRUS. 1955-57, XX: 35.
increasing level of radioactivity in the atmosphere, would help convince foreign opinion (especially in Asia) that Eisenhower was sincere in his peace efforts, and most importantly, might prevent the "mushrooming of H-weapons manufacture in countries which had not yet tested such weapons."  

Prior to the appearance of this article, an official from the French Embassy named Jacques Martin (purportedly acting on his own initiative) inquired at the State Department whether the U.S. government was re-considering its position regarding a test ban. He spoke about the "interesting idea" of proposing such a moratorium to the U.S.S.R. in order to "test them out." State Department officials explained that the American government remained "as firmly opposed to the idea of any nuclear moratorium as when the French Premier had raised it with the Secretary of State the previous November and for the reasons given then by the Secretary, which remained valid and persuasive."  

In Britain, opposition politicians continued to bombard the Conservative government with demands for a cessation of British (and American) nuclear weapons tests. In response, Foreign Secretary Anthony Eden argued that the government had to develop hydrogen weapons for the same reason that the Labour government had built the A-Bomb -- because they were the "most powerful deterrent to war." Since a hydrogen bomb could not be proven

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until it was tested, Britain had to go ahead with its test program in Australia. However, Eden also added in a vague, but suggestive, manner that this "did not mean that he would not like an agreement to restrict and regularize" the tests.\(^8\)

In order to deal with the political problems caused by the Labour Opposition, the British government decided to make a general statement on defense in Parliament that would include some information about the effects of fallout from tests. When he learned of this development, Paul Foster, a member of the AEC staff responsible for international affairs, warned that it would be embarrassing for the administration if the American people received their first official information on fallout from the British government.\(^9\) Also worried about the political implications for the United States of a British announcement while the American government "continued to maintain silence," Strauss suggested to the National Security Council that the U.S. make a similar report on or before the proposed date of the British statement.\(^10\)

The American statement took the form of a speech by Strauss on February 15. The AEC Chair did not mention the main reason

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for his statement (i.e., the need to beat the British to the punch), saying only that the American people wished to know about the "dangers of nuclear explosions and the measures which individuals could take to protect themselves if an atomic attack did ever occur." Strauss based his discussion largely on information acquired from the large thermonuclear test at the Bikini Atoll on March 1, 1954. He explained how the AEC had attempted to collect fallout data on five atolls located 10 to 350 miles downwind after the explosion. However, since much of the fallout had missed observation rafts set up by the AEC (due to an unexpected shift in the wind), data acquired from the test was only partly based on "actual measurements" and partly on "calculations." Despite the obvious problems involved in employing such data, Strauss suggested that it could be used to make estimates of casualties which "would have been suffered within this contaminated area if it had been populated" (emphasis added)." The AEC's estimates rested on several assumptions: first, that the "people in the area would ignore even the most elementary precautions"; secondly, that they "would not take shelter but would remain out of doors completely exposed for about 36 hours"; and thirdly, that they "would receive maximum exposure." On the basis of the data obtained from the Bikini test and "other information", the AEC estimated that following the test there had been sufficient radioactivity in a downwind belt (about 140 miles in length and of varying width up to 20 miles) to have "seriously threatened the lives of nearly all persons who took no protective measures." Some distance farther
from the point of detonation, at about 160 miles down-wind, the amount of radioactivity would have "seriously threatened the lives of about half of the persons in the area who took no protective measures." Altogether, about 7,000 square miles of territory down-wind from the point of burst was "so contaminated that survival might have depended upon prompt evacuation of the area or upon taking shelter and other protective measures."

Next, Strauss acknowledged that there were three hazards to health in any area where heavy fallout occurred. The greatest danger was exposure to external radiation. However, this hazard could be reduced by taking shelter and by simple decontamination measures. There was also the possibility of ingesting radioactive particles, such as strontium and iodine, through food or liquids. But, according to Strauss, the concentrations of these substances had been monitored at many locations after nuclear tests and the amounts detected had been "insignificant."

The last consideration was the possible genetic effect of radiation upon future generations. Although Strauss admitted that not enough conclusive data existed for an "incontrovertible forecast," he assured his listeners that the average amount of radiation received by residents of the U.S. from "all nuclear detonations to date had been about the same as the exposure received from one chest X-ray."

In this speech, which contained some pretty sobering information, Strauss attempted to underscore the differences between the Pacific tests and those planned for Nevada, explaining that only relatively small nuclear explosions would be conducted in the state, in contrast to the
tests of high-yield thermonuclear bombs carried out in the Pacific. Furthermore, the tests in Nevada (like the ones in the Pacific) were all planned for times when forecasted weather conditions would minimize the possible fallout hazard. Finally, the chairman assured Americans that the "actual dose of radiation" at the Nevada test site had been estimated to be "less than one-third of the greatest amount of radiation which atomic energy workers were permitted to receive each year under the AEC's conservative safety standards."

In conclusion, Strauss presented some justifications for the continuation of the testing program. Asserting that the AEC had learned a lot about the effects of radioactive fallout from the Pacific explosions, he contended that this data was important since an enemy (presumably the Soviet Union) might "resort to radiological threat against us." Given this possibility, it was imperative for the U.S. to conduct additional tests so that it could properly defend itself.\(^\text{11}\)

According to Hewlett and Holl, Strauss made this statement because he believed that a "policy of candor" was required to protect the AEC's testing programs.\(^\text{12}\) However, like his earlier statement in March 1954, Strauss' speech was far from completely candid. Although he went to great lengths to downplay the negative effects of radioactive fallout, he knew that scientists within the administration had failed to reach such reassuring


\(^{12}\) Hewlett and Holl, *Atoms for Peace and War*, 283.
conclusions. Indeed, a top secret scientific report (submitted the day before Strauss made his statement) indicated that it was "well-known" that the detonation of a nuclear bomb released considerable quantities of radioactive material which could "constitute a serious hazard to military or civilian people."

According to this report, there were two major uncertainties regarding this hazard: the ultimate destination of the radioactive debris (i.e., where it would end up) and its "biological effects."¹³

Another problem with Strauss' statement was that in suggesting that the March 1 test in the Pacific had occurred in an "uninhabited area," he conveniently overlooked the 236 Marshallese and many Japanese fishermen adversely affected by the tests. Perhaps he believed that he had to mislead the public in order to avoid protests against the upcoming Nevada tests. He knew that Americans, particularly those living near the Nevada Proving Grounds, would not be too keen on having these tests if they knew the full truth about what had happened to the Marshallese and Japanese during the American series in the Pacific in 1954.

Two days after the speech, President Eisenhower at a press conference on "Disarmament and Nuclear Tests" reinforced many of the ideas expressed by the AEC chairman. He began by stating that the subject uppermost in his mind was the "attainment of a

just and lasting peace." Accordingly, the U.S. government would renew its efforts towards disarmament at the next meetings of the Subcommittee of the UN Disarmament Commission, soon to convene in London.14 Secondly, American armed strength would be kept at a level sufficient to deter any aggressor. This strategy specifically included nuclear weapons, the "shield of the free world." Thirdly, the U.S. would press forward with the development of the peaceful uses of the atom. Finally, the president promised that his administration would continue to make the public aware of the "facts about nuclear weapons and their effects." In Eisenhower's view, Strauss' statement of February 15 was a good example of the administration's intention to keep the public well-informed. Indeed, as the chief executive pointed out, it was the duty of any responsible government to make such "facts" known to its citizens so that they could take measures to

14 The western-dominated UN Disarmament Committee, consisting of representatives from the United States, Canada, Britain, France and the Soviet Union, had been holding public meetings since 1952. Although this committee was established with the hope that it would become a genuine forum to discuss and negotiate disarmament measures, the United States and the Soviet Union soon began to use it to score political and propaganda points. As a result of this problem, combined with international concerns about nuclear weapons, a Subcommittee (composed of the same members) was established in April 1954 which allowed negotiations on disarmament to be pursued in private. It met shortly after without making any significant progress. But, in the fall of that year, when the Soviet Union indicated for the first time a willingness to discuss an international arms control agency with the powers of inspection, hope rose that a breakthrough might occur at the Subcommittee's next session, scheduled to begin in London on February 25. See Robert Divine, Blowing on the Wind: The Nuclear Test Ban Debate, 1954-60 (New York, 1978), 60; Harold Macmillan, Riding the Storm (New York, 1971), 299; Joseph Levitt, Pearson and Canada's Role in Nuclear Disarmament and Arms Control Negotiations, 1945-1957 (Montreal and Kingston, 1993), 3, 149-50, 162, 168.
protect themselves against a nuclear attack. It was also the
duty of the U.S. government to allay the "exaggerated fears of
the effects of testing nuclear devices in peacetime under proper
safeguards." Looking ahead, Eisenhower explained that the AEC
would soon begin another series of tests in Nevada. The major
purpose of this series, he argued, was to obtain civil defense
data. 15

Two weeks later, the National Security Council discussed
foreign reactions to Strauss's speech. According to a report
submitted to the NSC by the Operations Coordinating Board, the
immediate response had been moderate in tone. The Board
attributed this reaction to a number of factors, the most
important perhaps being that "no startling new facts were
revealed." In addition, other international developments, such
as Britain's announcement of its decision to build the hydrogen
bomb, had diverted attention from the American statement. 16 A
follow-up report by the OCB concluded, however, that although
specific objections to the AEC statement had been fairly
insignificant, "generalized fears about nuclear weapons were

15 Draft Statement by the President on "Disarmament and
conjunction with the AEC, the Federal Civil Defense
Administration planned a major program at the Nevada test site.
This program included technical tests on houses and industrial
installations, as well as the "first field exercise ever held by
civil defense workers." See letter from Val Peterson of the FCDA
to Herbert Hoover of the OCB, February 14, 1955, DSRG 59,

16 Memo for the OCB from Elmer Staats and the "Overseas
Reaction to the AEC Report on the Effects of High Yield Nuclear
Explosions," March 1, 1955, NSCRG 273, Folder: 239th Meeting, NA,
Washington.
increasing throughout the world."  

Some newspapers in France had reacted specifically to Strauss' public statement, attacking the U.S. government and its testing policies. L'Express published the remarks of Francis Perrin, the French High Commissioner for Atomic Energy. Asked for his opinion about a ban on all nuclear explosions, Perrin commented on the "disquieting" health and environmental effects of testing, suggesting that a ban would enhance the security of the world by preventing the development of new types of nuclear weapons. Although a ban would not necessarily stop the stockpiling of existing weapons, it would "break up the qualitative course toward more and more murderous instruments."  

In Japan, the injuries incurred by the fishermen, the distribution of radioactive fish in markets, the destruction of contaminated catches, and the daily accounts of radioactive food and water supplies, had all imbued the average person with a sense of personal danger and anxiety. Consequently, the

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18 Intelligence Report #72, "Recent Effects of Increasing Nuclear Capabilities on U.S. Allies," February 16, 1955, Series III, WHOSAD, DDEL, Abilene.


20 The January 1955 issue of Iryo, an official publication of the Medical Affairs Bureau of the Japanese Ministry of Health and Welfare, was devoted to various medical aspects of the Fukuryu Maru incident, including several colour photographs of the burns suffered by the fishermen. The issue was transmitted from the American Embassy in Tokyo to the Department of State and can be found DSRG 59, 711.5611/6-955, NA, Washington.
widespread desire that preceded the Fukuryu Maru affair to see nuclear experiments placed under additional safeguards had assumed much greater proportions. After the incident, the Japanese Diet had passed a resolution calling for the cessation of nuclear testing in the Pacific. Because of such pressure, the Japanese government adopted a stiff negotiating position regarding the compensation for injuries incurred as a result of the Bikini tests. After Strauss' statement, the Tokyo press almost unanimously condemned what was regarded as a "lack of proper U.S. interest and concern for Japanese sensitivities in these matters." The Mainichi voiced its anger that the AEC chairman had failed even to acknowledge that many Japanese and Marshallese had suffered serious injury as a result of the American tests in the Pacific.

Without referring directly to the AEC announcement, India's President Jajendra Prasad told his Parliament on February 21 that he hoped that the danger caused by nuclear weapons "would lead not only to the total banning of their production but also to the realization that war itself should be abolished as a means of settling any problem." C.R. Rajagopalachari, an anti-communist member of the working committee of the Congress Party, rather violently attacked the U.S. for conducting dangerous nuclear

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21 Intelligence Report #72, "Recent Effects of Increasing Nuclear Capabilities on U.S. Allies," February 16, 1955, Series III, WHOSAD, DDEL, Abilene.

tests and for using the threat of nuclear weapons as a mechanism of power politics. Highly critical of Strauss' statement, an editorial in the *Hindustan Standard* questioned the American claim that nuclear tests were carried out in the interests of the "Free World." According to it, the fallout from nuclear explosions "could float anywhere and might descend on people uninterested or uncommitted in any hot or cold war." This editorial was followed by another in the same paper appealing to the Western powers to stop the nuclear arms race.23

In England, Strauss' statement received about the same amount of news coverage as the British decision to build the H-Bomb.24 Only a few newspapers such as the *Manchester Guardian* questioned the candor and truthfulness of Strauss' effort to calm public fears about the dangers of radioactive fallout from testing.25 The British government's support of testing continued to put it in a difficult position with the Opposition and the public, however. In a conversation with Henry Cabot Lodge, the American Representative at the UN, Prime Minister Winston Churchill pointed out that the Labour party was very popular,


largely because of its fight against the bomb and nuclear tests.26 There was growing concern within the House of Commons regarding the effects of testing. On March 22, a debate took place on this issue in the House as a result of a Labour motion urging the government to give further consideration to the long-term genetic effects of the explosions being conducted by the U.S., U.S.S.R. and the U.K. and asking that scientists from these countries (and France) meet in conference to study the impact of nuclear tests. The speakers in favour of the motion emphasized the possible dangers to the human reproductive processes arising from the cumulative effects of testing in the atmosphere. In contrast, those who spoke on behalf of the government claimed that it was unlikely that the increase in radioactivity from tests would have any appreciable genetic effects. They also argued that it would be impossible, "given the current political conditions," to assure a genuine scientific discussion with the Soviet scientists. Finding the latter arguments persuasive, the House defeated the Labour motion.27

According to the American Embassy, the British government relied heavily for information regarding the effects of nuclear testing on AEC reports, which were "almost invariably treated

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26 Report from Henry Cabot Lodge, the American Representative at the UN, at the American Embassy in Britain (regarding his visit with Sir Winston Churchill) to the President, March 9, 1955, Administration Series, Folder: Henry Cabot Lodge 1955(4), AWF, DDEL, Abilene.

with the respect due a source of unquestioned authority."28

Thus, not only did the AEC exert a lot of power at home, it also had great influence abroad. Indeed, because of its control over nuclear information, the agency was able to shape the contour of the debate which took place in Britain to its own advantage.

In order to allay the growing fears about testing in the U.K., the embassy suggested that Lewis Strauss make a speech during his visit to London (planned for the last week of April). In the embassy's view, it would be helpful if the AEC Chairman could provide more information on fallout than in his report of February 15 as well as discuss the peaceful aspects of atomic energy.29 But Strauss rejected the embassy's recommendation, arguing that he could not disclose any more information in London than he had in his "carefully considered" speech of February 15. The State Department agreed that it would be inappropriate for Strauss to make a more detailed statement in Britain or in any other foreign country.30

On April 27, Ambassador Aldrich conveyed further information to the State Department about the official British position on

28 Ibid. At this time, the British had very little information of their own since they had only conducted approximately three atomic tests. See Robert S. Norris and William M. Arkin, "Known Nuclear Tests Worldwide, 1945-1995," in Bulletin of the Atomic Scientists 52(May/June 1996): 62.

29 Telegram from the American Embassy in London to the Secretary of State, April 1, 1955, DSRG 59, 711.5611/4-155, NA, Washington.

30 Telegram from Secretary Dulles to the American Embassy in London, April 13, 1955, DSRG 59, 711.5611/4-155, NA, Washington; See also OCB Minutes, April 15, 1955, WH0,NSC Staff: Papers, OCB Central File Series, DDEL, Abilene.
testing. Ronald Burroughs, the liaison for the British Atomic Energy Authority and the Defense Ministry, had explained to the American delegates at the UN Disarmament Subcommittee that the U.K. policy on a moratorium was similar to the American position. Despite the growing opposition from Labour and the public, the British leaders had aligned their policy with that of the United States. Indeed, if anything, the British government was "even more strongly opposed [to a moratorium] because of the necessity of developing its own thermonuclear weapons." Since India was sure to bring up its proposal for a moratorium again while the talks were underway in the Subcommittee, the British representatives called attention to the need to develop effective public arguments to counter the "strong emotional appeal that a moratorium held in many parts of the world." They emphasized that the moratorium proposal would be an important issue in the upcoming British elections in May. Therefore, they hoped that the U.S. and the U.K. could coordinate their public tactics to successfully fend off the proposal for a moratorium.31

The State Department agreed with the British approach. According to a telegram sent to London (which was cleared with the AEC and DOD), the U.S. "concurred in the desirability of exchanging views with the U.K. re a moratorium with the objective of coordination and maximizing the effectiveness of our position when the Indian proposal comes up in the Disarmament Commission." 31

Also included in the message were the major arguments favoured by the U.S. to oppose a moratorium. First, nuclear weapons were a "central part of the defensive capability of the free world" and testing was a "vital element" in maintaining and increasing this capability. Secondly, American studies had shown that "no significant health hazard results from nuclear test explosions." Thirdly, a moratorium would be extremely difficult to enforce and would require extensive inspection and monitoring. Finally, test "activities" contributed to the development of nuclear weapons, including those with strictly defensive applications, and the U.S. "could not cease experimentation which might increase the deterrent effects of [these] weapons." Thus the British and American positions on testing were almost identical at this time. Despite the growing opposition from Labour and the public, the British government aligned its position on testing with that of the United States in the spring of 1955.

From Ottawa, the American Embassy reported that the possible danger from nuclear tests had received wide attention in the Canadian press and "seemed to have disturbed a minority of Canadians." The press had widely reported and endorsed a proposal from several prominent British and American scientists for independent investigations of the effects of radiation. Reports of unusually high radioactivity levels following tests caused considerable public comment. Canadians across the country

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32 Telegram from the State Department to the American Embassy in London, May 10, 1955, Series III, WHOSAD, DDEL, Abilene. This telegram is also found in FRUS, 1955-57, XX: 74-5.
expressed their alarm by writing letters to newspapers and some
to the AEC directly. 33 Edmonton and Calgary newspapers reported
the highest degree of concern, a fact which was attributed to the
relative proximity of these cities to the tests being carried out
in Nevada. The Department of External Affairs received several
inquiries from individuals troubled by the possible genetic
effects of radiation. Like External Affairs, the Embassy
regarded such concerns as legitimate although it also felt that
some of these correspondents might be "mild eccentrics of the
sort who worry about fluoridation and vivisection." In
Parliament, the Co-Operative Commonwealth Federation (CCF) Party
demanded an investigation of radiation effects caused by nuclear
explosions. The Canadian government itself proposed a systematic
and continuing examination of the danger from radiation. On
April 4, the Minister of National Health and Welfare, Paul
Martin, expressed Canada's official position with respect to the
fallout and radiation questions. This position did not deviate
much from that of the United States and Britain. According to
Martin, "there had been a slight, though appreciable, increase in
radiation all over the world as a result of the weapons tests."
Nevertheless, the "best scientific evidence available indicated
that it was most unlikely that any significant genetic effects
would result from the increased radioactivity that had

33 See for example, Letter to the U.S. AEC from J.M.C.
Duckworth, General Secretary, Y.M.C.A., Halifax, Nova Scotia,
occurred."

Although the U.S. enjoyed the support of NATO allies such as Britain and Canada in its anti-moratorium stance, Henry Cabot Lodge worried that this position was less favourably viewed in other parts of the world. Based on his own "political diagnosis", he suggested that the American government take some positive initiative before India reintroduced the proposal for a testing moratorium. In his view, the U.S. could boost its reputation in the world on the nuclear issue by agreeing to sponsor a plan to coordinate, through the United Nations, national studies on the effects of radiation. By so doing, he argued, the United States could "divert attention away from its own tests to the U.K. and the U.S.S.R., and at the same time, avoid the pressures that were increasingly building up for a moratorium." During a telephone conversation with Lodge two days later, the secretary of state withheld a response to his proposal until Strauss was back from London. As Dulles pointed out, the Atomic Energy Commission had the power to make "judgements on the political situation in the UN," even though the agency "didn't know much about it." Furthermore, Lodge should understand that Strauss was "extremely negative on anybody else getting into this field." Thus, in addition to revealing his reluctance to

34 Telegram from the American Embassy in Ottawa to the Department of State, May 17, 1955, DSRG 59, 711.5611/5-1755, NA, Washington.

intrude on Strauss' turf, Dulles' remarks during this conversation also attested to the upper hand held by the AEC over State on the testing issue.

When Dulles took up Lodge's proposal with Strauss in New York a couple of weeks later, the AEC Chairman objected strongly, arguing that any such study would be "considered by a packed jury and, if it were adopted, the finding would undoubtedly be adverse to the U.S. possession of nuclear weapons." To avoid this adverse reaction, Strauss said that he would rather accept the "onus of opposing anything introduced by India or others," (Sweden had also announced its intention to propose a study on the effects of nuclear tests). In Strauss' view, the "use of antibiotics in modern medicine was probably producing mutations more serious than radiation." The chairman's real worry, however, was that such an investigation might lead the United States down the "dangerous path" where demands for the cessation of nuclear tests and the disclosure of information concerning American weapons might have to be taken seriously. The administration simply could not afford to put itself in a position where it would either have to "agree to cease tests as the result of political pressures or disclose information concerning American weapons to the danger of national security." Moreover, the AEC had already requested the National Academy of Scientists (NAS) to undertake a thorough investigation of radiation effects, which would become public after completion.36

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In agreement with this request, Eisenhower subsequently approved a decision by the NAS to appoint a committee of eminent scientists to study the effects of fallout. From the beginning, however, this investigation had several shortcomings. First, Strauss made it clear that any data discovered by the committee concerning "secret weapons" (i.e., atomic and hydrogen weapons) and their effects would not be released to the public. Secondly, the committee consisted of several experts who had been associated with the Atomic Energy Commission. Finally, it was designed as a completely national body without any representatives from foreign scientists. As Divine explains: "The Academy's committee reflected a purely American viewpoint... and few expected a report recommending an end to nuclear testing." 

From Strauss' viewpoint, the establishment of this committee was little more than a public relations measure. Since the "Teacup" series had begun (on February 18), public fears about the effects of radiation from the tests had steadily increased. On March 10, the Weather Bureau had reported a large radioactive cloud stretching for nearly one thousand miles over the U.S. from Nebraska to New Jersey. On March 12, two university science professors in Colorado had warned that the Nevada tests had

37 Ibid.  
38 Divine, Blowing on the Wind, 57.  
39 A detailed description of each of the fourteen nuclear tests carried out during the "Teacup" series is found in Richard L. Miller, Under the Cloud: The Decades of Nuclear Testing (New York, 1986), 213-239.
polluted the state's atmosphere to a dangerous degree. Although the Governor of Colorado said that these professors should be arrested for making this claim, the two held their ground, explaining to journalists that there was no safe level of radioactivity and warning of possible consequences, such as lung cancer, leukemia, and genetic birth defects.  

In order to counter these alarming developments, the AEC conducted what Divine aptly describes as "an intensive public relations campaign designed to convince the American people that the fear of fallout was groundless." Strauss, for example, referred ordinary Americans and government officials to an article published in the U.S. News and World Report which argued that American nuclear tests were very benign. According to the article, the AEC's tests had shown that "A wrist watch with a luminous dial would affect an individual, outside Nevada, as much as 'fall-out' from any A-Bomb tests in the U.S. to date." Concerns about genetic effects were unwarranted. After all, scientists had shown that fruit flies, raised for 128 generations in highly radioactive surroundings, did not degenerate as expected. Instead, they ended up a "better race of fruit flies -- hardier, more vigorous, more reproductive and with better resistance to disease." Furthermore, researchers had discovered that mice, subjected to heavy doses of radiation, showed "few adverse mutations in succeeding generations." Although the mice

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40 Divine, Blowing on the Wind, 42; See also Hewlett and Holl, Atoms for Peace and War, 290.

41 Divine, Blowing on the Wind, 43.
studies had indicated a "moderate increase in the occurrence of leukemia," the article optimistically concluded that the "fear that people are supersensitive to mutations was not borne out." 42

Throughout the "Teacup" series, the AEC's public relations program continued at both the local and national level. In April, representatives from the agency visited local communities like St. George, Utah, to give presentations designed to reassure the residents that the nuclear tests posed no danger to them. 43 In Washington, the Joint Committee on Atomic Energy held a hearing which gave AEC spokesmen a forum for bolstering their arguments. 44 The Chairman of the Committee, New Mexico Democratic Senator Clinton P. Anderson, began the hearing by stating that its purpose was to remove any unwarranted concerns about the Nevada tests. As Divine points out, "the witnesses, all from the AEC, quickly obliged him." 45 Lewis Strauss went first. Since the Soviet Union possessed atomic weapons, he argued, "We have no alternative but to maintain our scientific and technical progress at peak levels. The consequences of any other course would imperil our liberty, even our existence." 46 Strauss claimed that, as far as the AEC was aware, no civilian had ever suffered

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43 Howard Ball, Justice Downwind: America's Atomic Testing Program in the 1950s (New York, 1986), 75.

44 The hearing began on April 15.

45 Divine, Blowing on the Wind, 44.

46 Quoted in Ball, Justice Downwind, 41.
injury as a result of the Nevada tests.47

During a speech given to the alumni at the University of Chicago in June, AEC Commissioner Willard Libby gave the public more assurances about the benign nature of nuclear tests. Downplaying the health risks, Libby contended (this was a favourite AEC argument) that "natural radioactivities of the body, the effects of the cosmic radiation and the natural radiation of the radioactivities of the earth's surface constitute hazards which are greater than the test fallout hazards." On average, Libby calculated, the total dosage of radiation over the whole United States from tests was about 0.001 roentgen per year.48

What Libby conveniently forgot to mention, however, was that the people living or working in the vicinity of the proving grounds received much higher doses of radiation. As the AEC itself acknowledged in January in a message to the people who lived near the test site in Nevada: "At times, some of you have been exposed to potential risk from flash, blast or fallout."49

Eugene Haynes, an atomic worker for the AEC, for example, was ordered to drive within a quarter of a mile of ground zero after the seven kiloton shot, "Tesla," was detonated on March 1, 1955. Shortly after, he began to get sick to his stomach. He had received such a high level of radiation that the Surgeon

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47 Divine, Blowing on the Wind, 44.
48 Hewlett and Holl, Atoms for Peace and War, 294.
49 Miller, Under the Cloud, 215.
General was called out from Washington. According to an official document, "The dosimeter reading was off the scale, and the film badge, when developed later that day, indicated a total exposure of 39 Roentgens."\(^5^0\)

Ted Przygucki was one of the many soldiers who participated in the "atomic maneuvers" in Nevada in 1955. As he explained: "The main object was to see how our troops would react in case, in a war, our enemies dropped the A-Bomb on us." Immediately after participating in an experiment on May 5, Przygucki suffered from headaches, his teeth fell out, and he began getting terrible laryngitis. In 1976, he was diagnosed with cancer of the larynx.\(^5^1\)

Residents living near the test site in Nevada were also exposed to dangerous levels of radiation. After one test, Oleta Nelson watched with her husband as a large fallout cloud moved over her home in Cedar City, Utah. That night, the skin on her hands, arms, neck, legs -- all exposed areas of her body -- turned beet red. Within four weeks, she was weak and listless and most of her hair had fallen out. Ten years later, she died

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\(^5^0\) A few years after the accident, Gene and his wife had a genetically damaged son. Much later, Gene would die from a radiation-induced cancer called adenocarcinoma. When his wife decided to join others in a lawsuit against the government in 1985, she began to collect evidence in support of her case, writing to various government agencies for her husband's radiation dosage records. Although she knew that her husband had given daily blood and urine samples to the AEC for analysis, the agency claimed to have no records of his employment. See Carole Gallagher, *American Ground Zero: The Secret Nuclear War* (Cambridge, 1993), 37-40.

from a large tumour in her brain. At the time that Oleta died, her husband recalled that an unusually high number of young people in their neighbourhood were dying from leukemias and cancers. "They were holding three or four funerals a week," he said, "and that is a lot for a small town like this." In his view:

If the government had informed us, if there had been any information of the danger when they started this testing, if they had just said one word, I would have gotten out of here so fast it would make your head spin. The leaders of the AEC and DOD looked upon the people of southern Utah and Nevada as expendable .... They just kept saying, "Don't worry, there is no danger, there is no danger."52

At the time, there was some debate among scientists regarding the health risks posed by nuclear tests. Predictably, many of the AEC scientists, like Willard Libby, attempted to minimize these health risks. Others, however, such as Linus Pauling and Alfred Sturtevent, argued that radiation caused by nuclear explosions did pose a threat to human health since it could result in genetic and somatic defects.53

The U.S. government had been made aware of the potential health hazards of testing since 1946. In October of that year, after conclusion of "Operation Crossroads," the first series of postwar atomic tests, Colonel Stafford W. Warren, the Manhattan Project's chief radiological officer, warned the government about the dangers of nuclear testing:

52 Gallagher, American Ground Zero, 135.
53 Divine, Blowing on the Wind, 47-53.
There is a potential and actual absorption hazard. You need only to absorb a few micrograms of plutonium and other long-life fission materials, and then know that you are going to develop a progressive anemia or a tumour in from five to fifteen years. This is an insidious hazard and an insidious lethal effect hard to guard against.\footnote{Mary Manning, "Atomic Vets Battle Time," in \textit{The Bulletin of the Atomic Scientists} (January/February 1995): 59.}

Thus, as Howard Ball points out, "the pathological and genetic dangers of ionizing radiation were known to scientists when the AEC began above-ground testing in the Nevada desert in January 1951." For years, articles in the medical literature had documented the causal relationship between radiation and several forms of cancer.\footnote{Ball, \textit{Justice Downwind}, 39.} Although controversy about the minimum "safe" level of radiation dosage continued in 1955, even the AEC maintained limits for off-site exposure to 3.9 roentgens a year.\footnote{Hewlett and Holl, \textit{Atoms for Peace and War}, 218. In certain cases, AEC test managers could authorize higher exposure levels for selected individuals and conditions. Often, the atomic soldiers and workers received much higher dosages of radiation. See Miller, \textit{Under the Cloud}, 218.} In 1985, in a court case brought by Pat Broudy, the widow of an atomic veteran of the tests in 1955, government attorneys conceded that the United States had "been aware of the hazards of radiation since the inception of the nuclear weapons program."\footnote{Ibid.} As Broudy put it: "They [the government] knew it caused cancers, they knew it caused birth defects, but they felt it was worth the sacrifice of a few men for the good of the
In 1955, the administration also withheld information from the Japanese about American nuclear tests in the Pacific. In early May, the AEC sent out a press release announcing that it would soon carry out an underwater nuclear explosion "somewhere" several hundred miles off the West Coast of the U.S. The purpose of this test, called "Wigwam," was to obtain "essential information on anti-submarine defense." Although France, Britain and Canada had all received some advance notice about this test, the Japanese were not officially informed, and this added to the already existing tensions with the U.S. Upon hearing the press announcement, the Japanese Embassy in Washington asked the State Department for more information. What precautions was the U.S. taking, for instance, to ensure the safety of maritime traffic in connection with the underwater test? In a rather insensitive manner, the State Department and the Tokyo Embassy flatly rejected the Japanese requests for more details about the tests.  

The Japanese were unable to obtain much information about operation "Troll" either. This operation, which began on February 25 and ended on May 3, was undertaken by the AEC to

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58 Gallagher, American Ground Zero, 93.

59 Telegram from the Acting Secretary of State to the American Embassy in Tokyo, May 9, 1955, DSRG 59, 711.5611/5-955, NA; Office Memo from the Special Assistant to the Secretary of State to Mr. Hemmindinger, May 10, 1955, DSRG 59, 711.5611/5-1055, NA; Telegram from the American Embassy in Tokyo to the Secretary of State, May 11, 1955, DSRG 59, 711.5611/5-1155, NA, Washington.
evaluate the residual radioactivity (from the 1954 tests) in the Pacific ocean. According to an AEC report, "Widespread low-level radioactivity was found in sea water, plankton and fish samples" during this study. Although the AEC was confident that the levels of radiation detected were not high enough to cause concern as a possible hazard, the report was not sent to the American Embassy in Tokyo until May of 1956.\textsuperscript{60}

In June, the State Department raised questions about the commitments to the Marshall Islanders to compensate them for the damage caused by testing in March 1954. The U.S. Delegation to the 16th Session of the UN Trusteeship Council had indicated its frustration with the slow progress in assisting these victims. In response to a letter from State, Lewis Strauss assured the department that "several major projects" had been undertaken. The AEC had conducted a radiological survey of Rongelap Island to examine the levels of radioactivity of the soil and food such as crabs, shellfish, coconuts and arrow-root. In its report of December 1954, the AEC had estimated that the people could return to their homes by May of 1955. However, the information gathered from the radiological survey indicated that this would be impossible since the shellfish and crabs, which constituted a large part of the Marshallite diet, still "contained unsafe amounts of radioactivity." Furthermore, the islands north of the atoll were still "sufficiently radioactive" that people living on them would receive radiation exposure higher than the level.

\textsuperscript{60} Department of State Instruction to the American Embassy in Tokyo, May 4, 1956, DSRG 59, 711.5611/5-456, NA, Washington.
recommended by official agencies (such as the National Commission on Radiation Protection and the International Committee on Radiological Protection). The last medical checkup of the Rongelapese (in March) found that they were "all in excellent health with the exception of a few individuals who were suffering from chronic diseases which were present prior to March 1, 1954 and were unrelated to the fallout incident." All skin lesions had healed and white blood counts were falling within the normal range, "although the mean for the entire group was somewhat below that of the control population."  

In addition to the AEC's attempts to minimize the damage caused by its tests at home and abroad, the agency also attempted to improve its image by stressing the peaceful nature of its nuclear programs. In July, it invited over a hundred and fifty press representatives and scientists, as well as members of the local community and families of its employees, to an 'Open House' held at the Los Alamos Scientific Laboratory in New Mexico, describing the event as "almost a family affair," an opportunity to "see where Daddy works." Left unmentioned were the nuclear weapons produced at the lab or the controversial issue of nuclear testing and its biological and environmental effects. Instead, only the peaceful, scientific, and unclassified activities of the lab were open to the public.²

⁶¹ Letter from Lewis Strauss, AEC, to David Key, the Assistant Secretary of State for International Organization Affairs, June 8, 1955, DSRG 59, 711.5611/6-1455, NA, Washington.

⁶² Telegram from the Los Alamos Laboratory to the AEC Chairman, June 30, 1955, WHO,NSC Staff: Papers, OCB Central File
The Eisenhower administration also approved several information programs to counteract the international protest against testing. In order to convey a more positive image of the American nuclear projects, the United States Information Agency created three films focusing on "atoms-for-peace achievements" which were translated into thirty-one languages and made available in eighty countries. In the Marshall Islands, various Catholic parishes were given twenty-six motion picture prints on various subjects dealing with peaceful applications of nuclear energy.\(^3\)

The USIA also distributed 6,500,000 copies of a pamphlet written in thirty-four languages entitled "Atomic Power for Peace." In addition, the agency set up traveling "Atoms-for-Peace" exhibits in Switzerland, West Germany, United Kingdom, Italy, Netherlands, Finland, Denmark, Yugoslavia, Greece, Turkey, Japan, Pakistan and Argentina, which were viewed by a total of over two million visitors.\(^4\) In Italy, the public and press were unimpressed by the "Hollywoodish" exhibit. According to a first-hand report that appeared in the Three-Star Extra:

> It may be remarked that as only a small percentage of the Roman population saw the exhibition and realized its peaceful scope, the general impression of the public, misled by posters, was that at this particular moment it was extremely inopportune to recall to a

\(^3\) OCB Memo for the Record, "Meeting of OCB Working Group on Coordination of Nuclear Energy Projects and Related Information Programs," August 12, 1954, OCB Central Files Series, WHO, NSC Staff: Papers, DDEL.

frightened population something which is a destructive force, notwithstanding any possible peaceful use. This unfavorable impression was enhanced by two searchlights which nightly swept the peaceful Roman sky, reviving memories of past air raids and raising new apprehensions about the future.65

Despite such criticism, the Operations Coordinating Board felt that these programs were fairly well received. However, it also noted that "serious concern" continued to be expressed in the UN, Europe, Japan and India regarding the effects of nuclear explosions. In particular, there was growing anxiety about the possible cumulative genetic effects of radioactivity from the tests.66

As a result of the concern felt in Japan, the USIA planned to show its most elaborate "Atoms-for-Peace" exhibit in Tokyo. However, attempts to improve the U.S. image in Japan were overshadowed by comments made in Washington by Lampton Berry, the American Deputy Assistant Secretary of State for Near Eastern, South Asian and African Affairs. In August, just as the embassy was about to announce the upcoming tour of the exhibit, Berry stated publicly that Aikichi Kuboyama (the Japanese fisherman who had died of radiation poisoning six months after the March 1, 65


66 Briefing Note for the NSC Meeting, July 14, 1955, NSCRG 273, Folder: 255th Meeting, NA, Washington. According to NSC Policy 5507/2 (March 1955), the secretary of state and the chairman of the AEC were ultimately responsible for the implementation of these programs. However, they were expected to heed advice from the OCB to ensure the "maximum psychological advantage to the U.S."
test) had in fact died of jaundice. According to the embassy, this statement touched a "sensitive nerve" and was widely condemned in the press. It urged Washington to "refrain from further pronouncements of any sort on the Kuboyama case" since they would only aggravate matters at this sensitive juncture in Japanese-American relations.67

Thus, in 1955 the Eisenhower administration employed various public relations strategies at home and abroad to defuse the testing issue and deflect pressure for a moratorium. Speeches, exhibits, pamphlets, and films all contributed to the administration's effort to put American nuclear explosions in the best possible light. These tactics were only partially successful, however. Nuclear testing did not become an important domestic political concern in 1955 but it would emerge as a major issue during the election campaign the following year. International support in favour of a moratorium also continued to expand. Backed by Britain, the United States remained committed to its testing program, but opposition grew in India, Japan and Western Europe. At the same time, the Soviet Union began to make significant shifts in its policies on testing and disarmament.

Chapter Five

A MISSED OPPORTUNITY

Despite the negative health effects of its testing policies, and the continuing international pressure to stop nuclear explosions, the United States maintained its opposition to a moratorium throughout 1955. Within the Eisenhower administration, divisions about testing in particular and disarmament policy in general remained unresolved. Because of the problems the tests caused abroad and as a result of developments in Soviet policies, the State Department contended that a moratorium would be politically advantageous. However, other more powerful bureaucracies, notably the Atomic Energy Commission and the Department of Defence, remained firmly, even aggressively, opposed. In the end, the president was more persuaded by the arguments of the military bureaucracies than he was by those of the State Department and he failed to respond to promising proposals made by the Soviet Union in the spring of 1955.

In early 1955, as the Eisenhower administration prepared for the UN Subcommittee Disarmament talks, scheduled to begin February 25 in London, the internal debate over testing and disarmament policies heated up once again. Disagreements between the State and Defence departments, which first surfaced in 1954, sharpened over the course of 1955. Given the mounting
international concern about nuclear weapons, the Department of State concluded that the existing policy (NSC 112, which linked conventional and nuclear disarmament) was outdated, necessitating a new approach which would seek to negotiate a "limited first step toward disarmament, such as cessation of production of nuclear fuels, with adequate inspection" and an accord to "reduce nuclear weapons independent of agreement on conventional arms." In contrast, the DOD and AEC reinforced the traditional approach, advocating the "regulation of all armaments and armed forces under an adequately safeguarded and comprehensive plan."¹

These differences were aired during an inter-departmental meeting on February 9. According to the Defense Department and the Atomic Energy Commission, the step-by-step, limited approach to disarmament advocated by the State Department was unfeasible, ineffective and risky. They preferred an across-the-board plan which included both conventional and nuclear weapons. However, Secretary of State Dulles reminded the DOD and the AEC that the government's decisions in the disarmament field had to take political and psychological factors into account. The U.S. could not afford to continue a contradictory policy which placed it in the awkward political position of being secretly "opposed to disarmament" on the one hand, while being publicly in favour of policies such as "Atoms for Peace," on the other.

The Defense Department did not agree. According to Robert Anderson, the Deputy Secretary, State's approach might encourage

¹ See FRUS, 1955-57, XX: 29, footnote #18.
the Soviets to seek to overcome the American nuclear superiority by "hiding nuclear weapons." If the Soviets chose to respond in this manner, they might then be able to "wipe out U.S. industrial superiority through attack with nuclear weapons." Lewis Strauss had other worries. In his view, the initial stage of the State Department's plan (which involved the cessation of the production of nuclear fuels) would have a negative effect on the AEC's progress. After all, the American government had already "gone to great trouble and expense to develop the mining and milling of nuclear materials" and this operation was "just beginning to pay off most successfully."

Secretary Dulles agreed that the American position on disarmament (as established by NSC 112 in 1954) would remain the same at the forthcoming London talks. However, he also stressed that it was important for the administration to continue to seek a solution to the disarmament problem. Perhaps if the government came up with some practical proposal of a more limited nature, it might have a greater chance of success. Although rejected by the administration in 1954, the secretary pointed out that the Indian proposal for a moratorium on testing represented a precedent for a limited approach which did not attempt to "cover the waterfront."

Since these were difficult and complicated issues, and the heads of the agencies concerned were unable to give adequate, continuing attention to them, all present at the meeting agreed that a top-level individual should be brought into the government full-time with access to the president and the Cabinet to review
American disarmament policy. Although Eisenhower was not present, his Special Assistant for National Security Affairs, Robert Cutler, explained at the end of the meeting that the president had been briefed on all of the issues discussed and was aware of the "conflict of opinion" that existed within the administration.²

The next day the president presided at an NSC meeting where he heard the views of both departments. The secretary of state re-emphasized that the problem of disarmament was as urgent and difficult as any that the society faced. From past experience, he admitted, one might be tempted to say that it was an insoluble problem. However, the new developments in nuclear weapons technology had transcended past experience and traditional ways of thinking. At the very least, the existence of these weapons meant that the American government had to accept the "working hypothesis that a solution to this terrible problem could be found." Eisenhower was not as convinced of the urgency of this situation as was Dulles. Because of the difficulty in devising a foolproof system to abolish all nuclear weapons, he concluded that he still found himself "in firm support" of the position advocated by the Defense Department.

As a result of these differences, the Deputy Assistant Secretary of State remarked that it was "obviously going to be impossible to get full agreement on a firm U.S. position" prior

² Department of State Memo of Conversation, February 9, 1955, NSC RG 273, Folder: 236th NSC Meeting, NA, Washington. This memo is also found in FRUS, 1955-57, XX: 15-20.
to the beginning of the London talks. Nevertheless, as was usually the case, the position of the Defense Department and the Atomic Energy Commission held sway. After a reiteration of the differing positions, further discussion resulted in "changes in the State Department position designed to accommodate that position to the views of the DOD."³

The position shared by the DOD and AEC -- on both disarmament and a moratorium -- was reinforced by their desire to perpetuate, and augment, the power of their bureaucracies. It was also based on ideological assumptions about the Soviet Union. According to this worldview, it was impossible to negotiate with the Soviets because they were untrustworthy foes bent on world domination. The AEC Chairman in particular held an extreme view of the Soviets and their "inferior value system." He had no patience with "conscience-stricken" Americans who worried about the dangers inherent in an arms race. In his judgement, the real danger was not the arms race but the Soviet Union:

We are making bombs because we hope to discourage the use of bombs against us by a government that doesn't make any pretense of morals. I have noticed that heaven helps those who help themselves. Somebody else may think I am all wrong. Gandhi would -- you lie down in front of a juggernaut. There may have been people in antiquity who adopted Ghandi's position against the Huns or the Tartars -- but history doesn't return any record of them ....⁴

Undoubtedly, views like those held by Strauss were related


to the Soviet record under Stalin in the thirties and late forties. Although the U.S. and the U.S.S.R. had been allies of convenience during World War Two, American perceptions of Soviet hostility and untrustworthiness had hardened considerably in the postwar period. However, what Strauss and many others in the defence bureaucracies failed to acknowledge was that the Soviet leaders had already launched a "peace offensive" aimed at relaxing tensions with the West. In the aftermath of Stalin’s death in March 1953, shifts began to occur in Soviet foreign policy which suggested a more cooperative, even conciliatory, attitude towards the United States and its allies. In David Holloway’s view, nuclear weapons played a fundamental role in this change of attitude. Although Stalin had not allowed the atomic bomb to affect his conception of international politics, it did "shape the way that his successors thought about East-West relations." After Stalin’s death, Soviet leaders dropped the line that war with the West was "fatally inevitable" and instead adopted the policy of "peaceful coexistence." At the time, the State Department and several U.S. representatives at the UN recognized the changes in Soviet policy, as did a number of West European countries. The AEC and DOD did not give them any

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5 David Holloway, *Stalin and the Bomb: The Soviet Union and Atomic Energy, 1939-56* (New Haven, 1994), 344. According to the author, the term "peaceful coexistence" began to appear in statements made by Soviet leaders, like Nikita Khrushchev, in 1954. It "was defined as the alternative to nuclear war, as the policy that had to be followed if nuclear war was to be avoided ... Peaceful coexistence did not mean ideological coexistence, however, nor did it entail renunciation of the struggle with imperialism. But that struggle had to be conducted in such a way as to avoid nuclear war." (336)
weight, however.

Just prior to the opening of the London Disarmament Conference, the new Soviet Premier, Nikolai Bulganin, hinted during a conversation with newspaper publisher William Randolph Hearst that the Russian position on disarmament and testing might be changing. Bulganin told Hearst that the U.S.S.R. was opposed to a general moratorium on testing on the grounds that this was an insufficient response to the disarmament problem. But when asked whether the Soviets would consider an agreement restricting the number of nuclear weapons tests, the premier replied that the Soviets would consider any proposal to reduce the dangerous use of these weapons.6 Since this was the first time that the Soviets had indicated their official view on the subject of a general moratorium on nuclear weapons tests, the State Department believed that the president should have a response ready. After consultation with the other agencies, including the Defense Department and the Atomic Energy Commission, it recommended that Eisenhower, if asked, should make a public reply along the following lines:

The U.S. government was always willing to give serious consideration to all proposals which might be effective in increasing the chances for peace in the world. However, since the Soviet Union appears to have rejected the idea of a moratorium on tests of nuclear weapons, it is obvious that the U.S. could not consider taking any unilateral action which would place the United States and the free world at a disadvantage, as our program of atomic weapons testing constitutes an important part of our effort to strengthen the defenses

This draft reply contained two important assumptions. First, it assumed that the Soviet Union would reject a proposal for a limitation on testing, despite the fact that Bulganin had indicated to Hearst that his government would consider such a proposal. Secondly, the reply assumed that the "free world" would have a clear interest in opposing any unilateral action by the U.S. to limit testing. However, the State Department, perhaps more than any of the other bureaucracies, was aware that many of the countries of the "free world" did not agree with this position. Indeed, a secret intelligence report prepared for the department suggested that the increasing nuclear capabilities of the United States had actually contributed to an increasing sense of fear, not security, in Western Europe and Japan. This fear had led to widespread public demands for the cessation of H-Bomb tests. In Western Europe, it had also led to criticisms of U.S. policy towards the Soviet Union and a heightened desire for concrete forms of coexistence between East and West. In the U.K., dread of the new weapons and their effects was not the only reason for the increased emphasis by the government and opposition alike on some form of peaceful coexistence with the Communist world, but it "clearly was the chief one." In France, the sentiment in favour of coexistence was greater than anywhere

7 Ibid.

8 Intelligence Report #72, Prepared by the Estimates Group for the Department of State, "Recent Effects of Increasing Nuclear Capabilities on U.S. Allies," February 16, 1955, WHOSAD, Series III, DDEL, Abilene.
else -- so strong that almost all of the non-Communist political parties repeatedly endorsed the concept. The preoccupation in France with coexistence stemmed not so much from nuclear trends, but rather from the persistent hope that an agreement would be reached, however belatedly, with the Soviet Union which would obviate the rearmament of West Germany. Italian expressions of interest in coexistence were also frequent. In the past, the West German government had been suspicious of any accord with the Soviet Union. But now, with the increasing Soviet nuclear capability, several prominent West Germans decided that any agreement which would stabilize East-West relations would be beneficial.9

Fears about nuclear weapons and their effects also led to increased criticism of U.S. policy, particularly its "rigidity" toward the U.S.S.R. The governments of Britain and France were under strong public pressure to ask the Americans to stop testing. In addition, objections persisted regarding the military arrangements which permitted the U.S. alone to decide, in the event of a war, on the use of nuclear weapons. There was also mounting criticism, especially in left-wing and pacifist circles, of the presence of American air bases in Western Europe, which were thought by many to be provocative and dangerous.10

The Western European desire for coexistence, combined with the growing international opposition to testing and the internal

9 The Intelligence Report did not specify who these "prominent" West Germans were.

10 Intelligence Report #72.
divisions within the administration, created difficulties for the State Department. A "Position Paper" prepared by the department presented a remedy for this situation. Recognizing the political advantages that might accrue from a moratorium, State recommended that the administration re-examine its position. This was particularly necessary in view of the support in the U.K. and France for a moratorium and the qualified statements made by Bulganin regarding a ban. Until such a re-evaluation was completed, the U.S. position — "based in large part on the views of the DOD and AEC" — would remain opposed to a moratorium. Given the political tensions caused by testing, the department recommended that the U.S. representatives at the upcoming conference of the South East Asia Treaty Organization should endeavour to prevent the question from being raised. In private conversations with Britain and France, the American delegates could explain that the United States was still opposed to a moratorium on the grounds that it would harm the American weapons development program. However, they should avoid going on public record as either favouring or opposing a moratorium, but instead try to shift the focus towards the Soviet Union. Before the U.S. government declared its position, it should attempt, "as a tactical matter, to maneuver the U.S.S.R. into indicating its expected opposition." In other words, the American objective was to "let the Soviets bear the onus of rejection of this proposal, which admittedly appeals to many."

On March 14, AEC Commissioner Thomas E. Murray repeated his recommendation to the president in favour of a moratorium on the testing of large nuclear weapons, contending that the proposal would both freeze American superiority in thermonuclear weapons and prevent the further proliferation of these weapons to other countries.¹² On March 25, the National Security Council discussed Murray's proposal. General Robert Cutler, the President's Special Assistant for National Security Affairs, began by reading Murray's letter which he described as both "reasonable and temperate." According to Gerard Smith, the Special Assistant to the Secretary of State for Atomic Energy Affairs, many individuals in the State Department found Murray's reasoning persuasive. David Key, the Assistant to the Secretary of State for International Organization Affairs, had before the NSC meeting outlined for Smith the many reasons why his agency favoured Murray's proposal. As Key pointed out, there were "many purely political advantages" to be gained from American support for a limited moratorium. A substantial amount of foreign and domestic interest had built up in favour of a moratorium since Nehru first suggested it in April of 1954 and if the U.S. refused to support such a proposal, "it would probably suffer considerably in the eyes of large areas of world opinion, particularly among the neutralist and other nations in Asia, such

as India and Japan." The American government could not avoid taking a position on the question, since India had very recently repeated its request to be heard in the UN Disarmament Commission. Support for the proposal would also serve to counter the charges of American insensitivity to the world-wide anxiety about the effects of atomic testing. In addition, the U.S. might win a psychological victory by supporting a moratorium if the U.S.S.R. refused to agree. Conversely, the American government would lose heavily if it declined to endorse such a proposal while the Soviet Union favoured it. Finally, Soviet-American agreement on a moratorium might produce a relaxation of tensions that could improve the chances for other accords and political settlements. 13

During the NSC meeting, Gerard Smith admitted that he himself was rather less persuaded than Key about the value of Murray's proposal but he recognized that this was "certainly not a black and white problem." He then read from a memo that summed up the arguments being made in the State Department. If the technical assumptions underlying Murray's proposal proved to be valid -- i.e., that it was relatively easy to detect large nuclear explosions from afar -- the department believed that the psychological and propaganda advantages of a moratorium might

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prove decisive. Accordingly, Smith had recommended (and the Secretary of State had agreed) that the Department of Defense, the Atomic Energy Commission and the Central Intelligence Agency should examine these assumptions prior to any final judgement regarding the American position on a moratorium.

The other participants in the meeting were not as sanguine about the merits of a moratorium. Robert Cutler feared that a moratorium would "jeopardize the one great weapon [the thermonuclear bomb] upon which the free world relied for its ultimate security." The Atomic Energy Commission had similar worries and opposed a moratorium. It was "not abundantly clear," according to the AEC's representative, "that the U.S. had a considerable thermonuclear lead over the U.S.S.R.," as Murray had contended. The Defense representative, pointing out that the Pentagon's views had not changed since it opposed a moratorium in June 1954, strongly questioned the validity of Murray's technical assumptions and also stressed the importance of testing to provide the necessary nuclear warheads for intercontinental ballistic missiles. As a result of the opposition from the DOD and the AEC, the NSC decided to reject Murray's proposal.\textsuperscript{14} The AEC commissioner was then informed that although his suggestions had been fully considered by all of the agencies concerned, the consensus was that a moratorium was not in the U.S. interest.

\textsuperscript{14} President Eisenhower was not present at this meeting. See Memo of NSC Meeting, March 28, 1955, NSC Series, Briefing Notes Subseries, Folder: AEC -- Nuclear Testing [1954-59], WHOSANSA, DDEL, Abilene. These minutes are also found in \textit{FRUS}, 1955-57, XX: 62-64.
The proposal would, though, be passed on to the president's new Special Assistant for Disarmament, Harold Stassen, for further consideration.\footnote{Letter from the President's Special Assistant for NSA, Dillon Anderson, to AEC Commissioner Thomas Murray, June 20, 1955, \textit{FRUS, 1955-57}, XX: 126.}

Following up on the recommendation made earlier by his advisors, Eisenhower had appointed Stassen\footnote{Stassen had long been active in American politics, having served as the youngest governor of Minnesota and a member of the American delegation to the San Francisco conference which founded the UN in 1945. Beaten by Thomas E. Dewey for the Republican presidential nomination in 1948, Stassen had vigorously supported Eisenhower in the 1952 election and as a reward was appointed as head of the Foreign Operations Administration. See Richard Hewlett and Jack Holl, \textit{Atoms for Peace and War, 1953-61} (Berkeley, 1989), 296; Robert Divine, \textit{Blowing on the Wind: The Nuclear Test Ban Debate, 1954-60} (New York, 1978), 60.} on March 19 to "conduct on a fulltime basis a further review of U.S. policies on control of armaments."\footnote{Matthew Evangelista, "Disarmament Negotiations in the 1950s," \textit{World Politics} 42 (July 1990): 518.} This appointment was a smart public relations strategy which made it appear as if the administration was seriously interested in arms control. Eisenhower was very pleased, for example, when the press dubbed Stassen the "Minister of Peace."\footnote{Hewlett and Holl, \textit{Atoms for Peace and War}, 296.} The president got more than he bargained for in this appointment, however, since Stassen took his new job seriously and quickly became an energetic and persistent advocate of arms control within the administration.

Predictably, Stassen met stiff opposition from the defence bureaucracies when he attempted to revise U.S. policies on testing and disarmament. Although the State Department was more
supportive, he received little backing from the president. During a meeting with Eisenhower on March 21, Stassen described the first steps that he had taken to set up a study on disarmament policy. He also mentioned the possibility of having some informal sessions with the Soviets in order to discover "what was on their minds" regarding the prospect of reaching an agreement. In response to this suggestion, the president advised Stassen to "keep his own counsel" on ideas like this until he had a chance to discuss them with either Secretary Dulles or himself. As Eisenhower explained, in many fields the American government gave the impression of "talking in many tongues." It was particularly important, he thought, to avoid this appearance in the field of disarmament.19

Throughout the spring, Stassen carried out his review of American arms control policies. The importance of this review became increasingly important as the United States was presented with striking evidence of new flexibility in Soviet policy. Although Nikolai Bulganin had replaced Georgi Malenkov as premier in early 1955, it was First Secretary Nikita Khrushchev who rose to the top in Moscow at this time.20 This change in leadership

19 Report of Meeting between Governor Stassen and the President, March 22, 1955, DDE Diary Series, AWF, DDEL, Abilene.

20 After a power struggle with Khrushchev, Malenkov resigned the premiership on February 8, 1955 and was replaced by Nikolai Bulganin. Nevertheless, Bulganin was, as William Thompson points out, "unequivocally the second man in the leadership; he remained head of government for more than three years, but never emerged as an independent political force. Khrushchev's position as first among the members of the collective leadership was now beyond any reasonable doubt." See William J. Thompson, Khrushchev: A Political Life (New York, 1995), 141-2.
had important implications for international politics since Khrushchev was, as William Thompson puts it, "more human than his predecessor or even than most of his foreign counterparts, and for much of the world that was enough to make the U.S.S.R. seem less mysterious or menacing." In terms of Soviet-American relations, Khrushchev's ascendance was also significant since he quickly "became an instrument as well as a shaper of foreign policy."21 Throughout 1955, he pursued initiatives in foreign policy designed to improve relations with the West.

On February 25, 1955, the day that the disarmament talks began in London, the U.S. Ambassador, Winthrop Aldrich, reported a friendly conversation that he had with the Soviet UN Representative Iakov Malik. Aldrich came away from this meeting with the impression that the Soviets "sincerely believed that some accommodation with the United States was possible."22 Later in the spring, the U.S.S.R. showed encouraging signs of a new moderation in foreign policy. Western observers noted Khrushchev's fence-mending visit to Yugoslavia as well as the Soviet move to negotiate a peace settlement with Japan.23 Even more significantly, Khrushchev decided in late April that the Soviet Union would sign a peace treaty with Austria, something that the Russians had resisted since 1945. At the time, CIA

21 Thompson, Khrushchev, 150.

22 Telegram from Aldrich in London to the Secretary of State and the President, February 25, 1955, Dulles-Herter Series, AWF, DDEL, Abilene.

Director Allen Dulles perceived this Soviet move "as the most significant since the end of World War II." He and brother Foster agreed that it suggested "great opportunities." The Austrian treaty, which provided for the withdrawal of occupation forces and the establishment of a neutral Austria, was signed by the former wartime allies the following month.

On May 10, the Soviet Union undertook another important diplomatic initiative when it introduced a dramatic set of new proposals during a meeting of the Subcommittee of the UN Disarmament Commission in London. Calling for an end to the production of all weapons of mass destruction and a major reduction of armed forces and conventional armaments, the proposals also included more novel elements such as the dismantling of foreign bases, a control system which included mutual ground inspection, and a moratorium on nuclear weapons testing (by 1956). In David Holloway's view, these proposals marked a "major shift in Soviet policy, and looked like an attempt to move beyond the rhetoric of disarmament to a position from which agreements might be reached." When the Soviets put forward their offer, they knew that it had a good chance of being accepted by other Western powers such as Britain and France. Indeed, the Soviet proposal contained recommendations similar to

26 Pruissen, "Beyond the Cold War," 65.


26 Letter from James Wadsworth, the Deputy Representative at the UN Disarmament Commission, to Henry Cabot Lodge, the Representative at the UN, May 11, 1956, FRUS, 1955-57, XX: 78-79.

27 Holloway, Stalin and the Bomb, 341.
ones included in a memorandum put forward by the British and French governments in the months prior to the meetings of the UN Disarmament Subcommittee. According to A.A. Roshchin, the Soviet representative who helped draw up the Soviet offer, "in essence [it] represented acceptance by the U.S.S.R. of the proposals of the Western states." The initial Western response to the Soviet offer was favourable. Unfortunately, however, the proposal never got to the negotiating stage. After some consideration, the Eisenhower administration made its opposition clear and the earlier French-British proposals were withdrawn. From Roshchin's perspective, "all this was incomprehensible."

The American decision to brush aside the Soviet offer put the State Department and the American representatives at the disarmament talks in a very difficult position because they had nothing to offer as a counterproposal. Indeed, James Wadsworth, the American Deputy Representative on the Disarmament Commission, worried that the Soviet proposals would expose the lack of flexibility on U.S. policy on disarmament. He also advised Washington to recognize that when all the non-essentials of Moscow's proposals were stripped away, it was obvious that the

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28 The Anglo-French memorandum, intended to form the basis of discussion for the UN Disarmament Subcommittee, included goals such as the total prohibition of the use and manufacture of nuclear weapons, major reductions in all armed forces and conventional armaments, and the establishment of adequate organs of control and inspection. See Evangelista, "Disarmament Negotiations in the 1950s," 502-3; Hewlett and Holl, Atoms for Peace and War, 297.

29 Quoted in Holloway, Stalin and the Bomb, 341.

30 Ibid.
Soviets had made "tremendous concessions" compared to earlier proposals. Because of the political problems caused by the new developments in Soviet policy, combined with the absence of any new American initiatives, the State Department could do nothing but recommend that the U.S. delegates ask for a recess in the talks.

As Matthew Evangelista points out, it is difficult to determine, in the absence of archival materials, the motivations behind the shift in Soviet policy. However, there is enough evidence to suggest that there was genuine interest in an agreement which might have resulted in mutual reductions in nuclear and conventional forces. Further evidence of this new Soviet outlook on arms control came in a conversation in Moscow on June 9 between U.S. Ambassador Charles Bohlen and Marshal Georgi Zhukov in which the latter discussed the importance of disarmament and the necessity of improving relations between the U.S. and the U.S.S.R. In Bohlen's view, disarmament appeared to be a "real concern of the Soviet government at the present juncture." Zhukov stated that the time had come for a bold move in the disarmament field. Although the Soviet May 10 proposals

31 Letter from James Wadsworth, the Deputy Representative at the UN Disarmament Commission, to Henry Cabot Lodge, the Representative at the UN, May 11, 1955, FRUS, 1955-57, XX: 78-79.

32 Telegram from the Department of State to the Embassy in France, May 12, 1955, FRUS, 1955-57, XX: 85-6. The recess began June 1.

33 Evangelista, "Disarmament Negotiations in the 1950s," 507.
were a step in the right direction, he believed that they did not
go far enough. In Bohlen's view, Zhukov's comments reflected the
"extent to which at least some Soviet military leaders were
preoccupied with the question of disarmament."\textsuperscript{34}

The Central Intelligence Agency also believed that the
Soviets had a genuine interest in reaching an agreement which
would end testing and limit the arms race. Like other observers,
the agency recognized that there had been a major change in the
U.S.S.R.'s approach to arms control since Stalin's death. In
June, the CIA presented a report to the NSC which attempted to
explain the new Soviet proposals from the perspective of the
evolution of the U.S.S.R.'s policy since March 1953. It noted
that after Stalin's death, the Russian approach became more
conciliatory. And, with Khrushchev's rise in early 1955, Soviet
policy had entered upon a new diplomatic phase with the West,
confirmed by the signing of the Austrian Peace Treaty.
Similarly, the Soviet disarmament proposal of May 10 (which was
similar to the Anglo-French memorandum) represented, at least on
its face, "a quite radical departure" from previous Soviet
positions.\textsuperscript{35}

From the CIA's perspective, these recent moves suggested a
flexibility that had been absent in the "sterile negativism" of

\textsuperscript{34} Telegram from the American Embassy in Moscow to the
Secretary of State, June 10, 1955, International Series, AWF,
DDEL, Abilene.

\textsuperscript{35} Memo from Sherman Kent, the Assistant Director of
National Estimates, for the Director of Central Intelligence,
June 14, 1955, NSCRG 273, Folder: 253rd Meeting of the NSC, NA,
Washington.
earlier Soviet policies and opened up the possibility that the
U.S.S.R. was "ready to see the stalemate on certain important
issues broken." Moscow might even be prepared to put some
serious bargaining counters on the table. Several recent events,
such as the displacement of Malenkov by Khrushchev and the
growing tensions in the Formosa Strait (between the United States
and Communist China), probably had some precipitating effect on
these changes in Soviet policy. However, long-term factors were
perhaps more important. Fear of nuclear war had spread in the
Communist world just as it had in the non-Communist. Khrushchev
seemed to recognize more acutely than Stalin had that any
substantial risks that might lead to general war had to be avoided.36

In the agency's view, economic considerations were even more
important to the Russian leaders. If the U.S.S.R. was to build
up its strategic air force, develop guided missiles and
reorganize its ground forces for nuclear warfare, the cost would
be "fantastically high." In 1955 the Soviet leaders had felt
obliged to increase their military budget (by twelve percent) and
would probably do so again the following year. The impact of
this high military expenditure on the Soviet economy would be
registered as a decline in the growth rate of investment in
agriculture and industry. Historically, whenever the Russian
leaders had accepted the necessity for an increase in the
military budget, they had to accept a decline in the growth rate

36 Ibid.
of their economy. Therefore, because of their plan to maintain maximum rates of growth in order to approach closer to the West in overall economic strength, the CIA believed that they would likely welcome an opportunity to reduce their military spending. An easing of international tensions would permit them to reduce their military programs and expenditures. Indeed, it was "entirely plausible that this whole complex problem of the mounting burden of military costs could be the principal factor behind the current [conciliatory] posture of Soviet foreign policy."\(^{37}\)

The CIA's report concluded that the Soviet leaders had "apparently decided ... that they must embark on a calculated policy aimed at reduction of tensions, whether for a short period or a longer time." Such a relaxation would not only decrease the threat of nuclear war, it would also give the U.S.S.R. time to focus on its own economic development and resolve its domestic problems. Hence, the Soviets were "probably prepared to reach some kind of disarmament agreement, and would probably actually implement it to some extent, since it was in the Soviet interest at this time to reduce the burden of arms expenditures."\(^{38}\)

Eisenhower and Dulles as well as the JCS were very mindful of the economic concerns which underlay the Soviet preoccupation with controlling the arms race. Forwarding to Secretary Dulles two letters that he had received from C.D. Jackson, one of his

\(^{37}\) Ibid.

\(^{38}\) Ibid.
special assistants and Walt Rostow, a professor at MIT, the president observed that their gist was that the United States was "winning the cold war" because it made it impossible for the Soviets to keep up -- "they would go broke if they did." In an NSC meeting on May 19, the secretary of state contended that the Soviets had completely altered their policy. Whereas the policy had been "hard" in the past, it was now "becoming soft." The Russians were seeking some limitations on the arms race "not merely as a trick, but because they could ill afford to sustain this burden." Similarly, in several messages to the president, Dulles argued that a major reason why the Soviet Union was advocating arms control was "undoubtedly ... to relieve itself of the economic burden of the present arms race." Recent conciliatory Soviet moves were not deceitful but in fact reflected a genuine desire for better relations with the West, "whose vitality had put too much of a strain on them." In addition to weaknesses in their industry, the strain of their assistance to the Chinese and other aid recipients (such as the North Koreans and the Vietminh) was beginning to show. They could no longer bear the burden of modern armaments on a "long haul" basis. The new Soviet leaders, such as Khrushchev, Bulganin, and Zhukov, had

39 Telephone Call from the President to Secretary Dulles, June 28, 1955, DDE Diary Series, AWF, DDEL, Abilene.

40 Quoted in Evangelista, "Disarmament Negotiations in the 1950s," 524.

41 Memo for the President from Secretary Dulles in Geneva, June 18, 1955, International Meetings Series, Folder: Geneva Conference, AWF, DDEL, Abilene.
obviously decided to "accommodate themselves to the free world rather than buck it." 42

Despite the American rejection of their May 10 proposals, Soviet actions continued to provide further evidence of their interest in an agreement to limit arms and testing. On June 29, the Soviet delegate at the World Peace Conference announced that his country was prepared to stop their nuclear testing program. 43

From the summer of 1955 until 1957, the U.S.S.R. also made significant unilateral reductions to its conventional forces. In Evangelista's view, Khrushchev was motivated by economic concerns when he made these reductions: "In the transcript of his tape-recorded reminiscences, ... [Khrushchev's] remarks about the reductions come directly after his statement that the United States was using the arms race to destroy the Soviet economy." 44

In order to take advantage of the opportunities offered by the shifts in Soviet policy, the British government urged the United States to agree to a summit conference to discuss important issues such as European security, the future of Germany, and disarmament. After Stalin's death, Churchill had


44 According to Evangelista, the U.S.S.R. cut back its armed forces by an estimated 1.84 million men between 1955 and 1957. See Evangelista, "Disarmament Negotiations in the 1950s," 510-513.
tried to convince Eisenhower to attend such a meeting but his efforts were not backed by his London subordinates. When Anthony Eden came to power in April of 1955, he was able to mobilize greater governmental support for a summit. At the time, Eden's interest in such a meeting was connected to domestic political considerations. As Ronald Pruessen points out, however, Eden and his associates "were also fully convinced that all by itself Moscow's altered stance both invited and required a meaningful response."\(^{45}\)

Distrustful of the U.S.S.R., the American president had resisted the idea of a summit from the beginning of his administration. However, the changes in Soviet behaviour (especially the signing of the Austrian Peace Treaty), combined with increased pressure from Britain and France, convinced Eisenhower that the U.S. must respond positively. Nevertheless, as McGeorge Bundy points out: "The 1955 summit itself was not the product of any American desire for such a meeting."\(^{46}\)

Once the U.S. agreed to this summit, there was more debate in the administration regarding the American position on disarmament and testing. On May 26, the President's new Assistant for Disarmament, Harold Stassen, prepared a paper for Eisenhower based on his analysis of the Soviet disarmament proposals. Significantly, Stassen did not reject them out of hand, believing rather that they might serve as the basis for an

\(^{45}\) Pruessen, "Beyond the Cold War," 64.

\(^{46}\) McGeorge Bundy, *Danger and Survival: Choices About the Bomb in the First Fifty Years* (New York, 1990), 296.
agreement with the U.S.  

In a progress report submitted to the president the next month, on June 23, Stassen included some recommendations which marked a fairly radical departure from past American policies. In this report, he explained that many differences remained in the administration regarding arms control and not all the agencies supported the plan he was developing. Convinced that it would be difficult to maintain public support for the current American position, Stassen explained that the primary objective of his new plan was to stabilize, but not necessarily reduce, the armaments buildup (including conventional, chemical, bacterial and nuclear weapons). According to his plan, all signators would agree at an early fixed date to cease (or at least limit) the fabrication of all such weapons, halt all nuclear weapons testing and abandon any plans for the further expansion of foreign bases. In addition, the signators would be required to disclose, in stages, information about their existing armaments, facilities and expenditures, and to permit on-site verification of such disclosures by an international organization. If any signator detected a serious violation of this agreement, it would be abrogated immediately.

As Stassen emphasized, his plan was an attempt to halt, or at least slow down, the arms race. He did not believe that any

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47 Hewlett and Holl, Atoms for Peace and War, 297.

appreciable reductions in armament levels were feasible without resolution of some of the major political issues causing international tensions, such as the divided status of Germany, China, Korea and Vietnam. The American government should therefore make it clear that only if these other issues were resolved, and only if the first phase of his plan was successfully implemented, would the U.S. then be willing to proceed to further stages involving the actual reduction of both conventional and nuclear weapons.69

As Evangelista points out, Stassen's recommendations were close enough to the Soviet proposals of May 10 to constitute a very good basis for negotiations with the U.S.S.R. His plan addressed a number of the important Soviet concerns such as the economic costs of producing nuclear weapons, the proliferation of U.S. bases, and nuclear testing.50 Even Eisenhower admitted that it had the virtue of being a creative starting point for negotiations.51

Nevertheless, the president ultimately sided with his defence bureaucracies as they rejected most of Stassen's recommendations. The most vociferous criticism of Stassen's plan came from the Joint Chiefs of Staff and the Defense Department. In a top secret memo to the Secretary of Defense, JCS Chairman Arthur Radford outlined the reasons why the JCS were unhappy with

69 Ibid.

50 Evangelista, "Disarmament Negotiations in the 1950s," 519.

51 Hewlett and Holl, Atoms for Peace and War, 298.
the proposal. To begin with, there were many assumptions underlining the plan that the JCS did not share. As Radford observed, Stassen's report often referred to the current world trends in armaments as an "arms race". However, the JCS did not agree that a "race" was on. Such a choice of words gave the impression that the Americans were behind, that they were straining to keep pace with the Soviets in this field, when in fact the U.S. and its allies had, as a matter of policy, "endeavoured to set a level of forces and armament expenditures which could be maintained over the long term." Apparently not recognizing that what he had just described was indeed an arms race, Radford went on to argue that "if the U.S. came to believe that it was necessary to embark on an arms race," it would win since "its armaments output could be increased many fold -- well beyond that of the Communist Bloc."

In addition, the JCS rejected Stassen's premise that an accord with the Soviet Union was achievable. Although the Chiefs admitted that Soviet tactics appeared "temporarily to have undergone change," this did not mean that their objectives were different or that they were genuinely seeking an equitable and effective disarmament agreement. Many of the existing international tensions were the "direct result of the aggressive Soviet policies and actions" and could be "eradicated overnight if they [the Soviets] were willing to conform to decent international behaviour." Moreover, the "lessons" of history had taught that the U.S. should be wary of any type of agreement to limit arms. Probably referring to the Washington naval treaties
reached after WWI, the JCS felt that "experience had shown" that past international arms control accords had not averted war, but instead had served to "permit the rearmament of the violator without awakening timely counteraction by the intended victims of aggression."

The Joint Chiefs of Staff stopped short of rejecting every aspect of Stassen's proposal. They were pleased that it called for an adequate verification and inspection system. They were also happy that it did not demand a ban on atomic weapons. In addition, they liked the plan because, if it was implemented, it would leave the "Free World, at least temporarily, in an over-all position of military superiority vis-à-vis the Communist bloc."

On balance, however, they saw more negative than positive features in the proposal. Whereas Stassen's plan proposed that the "levelling off of armaments" would occur prior to the elimination of the causes of world tension, the JCS stressed that the resolution of these problems and the creation of an "optimum international climate" should have priority and, indeed, they should be "essential preconditions" to any agreement. In the absence of a "revolutionary change in the ambitions and intentions of the Soviet regime," the JCS believed that the current arms buildup posed less of a risk to the security of the U.S. than an agreement which would restrict the development of nuclear weapons.52

52 Memo from Arthur Radford, Chairman of the Joint Chiefs of Staff, to the Secretary of Defense, June 16, 1955, NSCRG 273, Folder: 253rd Meeting, NA, Washington.
In a report on June 28 concurring with the JCS, Secretary of Defense Charles Wilson added his own concerns about Stassen's plan. An arms limitation agreement, he asserted, would be "hazardous" until there was proof that the Soviet Union intended to live in peace with the rest of the world. Moreover, the revolution in nuclear weaponry, together with the large measure of secrecy provided by the Iron Curtain, made the enforcement of the plan impracticable. The U.S.S.R. was unlikely to concede the required access to and control over their territory and affairs. Indeed, even the U.S. would find "such an invasion of its science and industrial privacy extremely disruptive to its economic system." In general, the DOD disagreed with "any concept that limited the forward march of technology in military fields, such as the limitation of further nuclear weapons tests." Given the international climate, the best hope for peace was "deterrence by armed strength." 53

During a Planning Board meeting, Stassen summed up the fundamental differences between his views and those put forward by the Joint Chiefs and the Defense Department. In essence, the JCS believed that, given world tensions, which they believed were caused by the untrustworthy Soviet Union, no arms limitations of any kind were desirable. As preconditions to any agreement, a radical alteration of Soviet international behaviour was necessary. In Stassen's view, this was too much to expect.

Something had to be done about the arms race soon and the U.S. should play a role in this process, if it was to maintain its status as a world leader.\textsuperscript{54}

These differences were the major focus of a NSC meeting held on June 30, 1955. After hearing the views presented by both sides, Eisenhower and Dulles made it clear that they, like Stassen, did not agree with the central argument presented by the JCS and the DOD -- that a wholesale transformation in Soviet policies was an absolute precondition of any arms limitation agreement. In response, Secretary of Defense Wilson tried to modify his department's position slightly by arguing that he would like to see some progress in the settling of the political controversies between the U.S. and the U.S.S.R. prior to the conclusion of any accord. However, he then reverted to his original position by stating that it would be impossible to get an agreement on inspection (required in any arms limitation plan) "if the Soviet attitudes and policies did not significantly change." In his opinion, the Iron Curtain had to be "cracked and reversed."\textsuperscript{55}

Admiral Radford amplified the views of the JCS during this important meeting. According to him, China had to be included in any arms limitation agreement since the Soviets might decide to "hide nuclear weapons in the vast spaces of Communist China."

\textsuperscript{54} Principal Points Raised in Planning Board Discussion of Governor Stassen's Proposals, June 28, 1955, NSCRG 273, Folder: 253rd Meeting, NA, Washington.

\textsuperscript{55} Minutes of NSC Meeting, June 30, 1955, NSC Series, Folder: 253rd Meeting of the NSC, AWF, DDEL, Abilene.
In general, the JCS Chairman argued that if the United States followed the courses of action recommended in Stassen's plan, it would eventually reach a position of "absolute military inferiority vis-à-vis the Soviet Union." Replying with considerable warmth to Radford's statements, the president retorted that so far as he could see, the JCS wanted the United States to "proceed as at present in the arms race despite the fact that this was a mounting spiral towards war." Although he could see some difficulties in Stassen's plan, at least it had the advantage of providing a basis for negotiations on the inspection issue. The United States had to get a better idea of what these "Soviet villains would do in order to find out what could be achieved by way of an acceptable inspection system."

The State Department presented its views next which were, according to Secretary Dulles, "somewhere between those of the JCS and those of Governor Stassen." State was convinced that the U.S. had to make some positive move in the direction of disarmament. Otherwise, Dulles predicted that the U.S. would lose the support of the allies (and the right to use bases in their countries). The American government could not afford to wait for the settlement of a whole series of political problems with the Soviet Union before moving ahead with disarmament. Arms limitations and political settlements should proceed concurrently. In addition, Dulles disagreed with the JCS and the DOD about the chances of an arms agreement with the U.S.S.R. In his view, the Soviet leaders were prepared to make some concessions. They genuinely wanted some reduction in their
armaments burden so that they could deal more effectively with their severe internal economic problems. Dulles predicted that Stassen's plan would not go far enough to satisfy public opinion in the U.S. or allied countries. Especially in Britain and France the public was calling not just for a levelling off of the arms race but for a reduction or elimination of arms.

In the president's view, the Soviets would not desert their Marxist ideology nor their ultimate objectives of world revolution and Communist domination. Having found that an arms race was much too expensive a means of achieving these objectives, however, they now preferred to use non-military means. Therefore, if the U.S. rejected a political-diplomatic approach, and appeared instead to prefer military solutions to achieve its goals, it would lose the support of the world.

Sensing Eisenhower's drift, Chairman Strauss made a suggestion for a modest symbolic gesture. Unlike Stassen and the State Department, he believed that the United States had to assume that the Soviets would not act in good faith. Like the JCS and and the DOD, he doubted that Soviet attitudes and policy would undergo any genuine major changes for the better. Therefore, the best solution was to return to the earlier "Atoms for Peace" plan (the proposal for an international atomic energy pool outlined by President Eisenhower on December 8, 1953 and subsequently rejected by the Soviet Union). In Strauss' opinion, such a plan would both "put the Russians at a strategic disadvantage and take the heat of world opinion off the United States."
In the end, this high-level meeting did nothing more than air differences among the participants. Eisenhower concluded by recommending that Stassen should attempt to modify his plan so that it included more discussion of an inspection system and policing policy that would be acceptable to the U.S. He also recommended that Stassen give consideration to the idea proposed by the AEC Chairman. What was perhaps most striking about this meeting was the wide divergence of opinion regarding Stassen's plan. Whereas the JCS, the AEC and the DOD opposed any arms limitation with the Soviet Union, the State Department and the President's Special Assistant for Disarmament believed that an agreement was both necessary and possible. Unlike the other bureaucracies, the State Department was very concerned about the international political problems caused by the U.S. arms buildup (and its testing policies). In addition, it was more hopeful that an accord with the Soviet Union was achievable. Although Eisenhower indicated some agreement with this perspective, he did not support it wholeheartedly. He seemed to realize that new approaches to arms control were politically necessary, but he was unprepared to back policy changes that might lead to meaningful agreements. At the end of the meeting, he conveyed more interest

56 Ibid. It is interesting to note that when Stassen followed up on the first recommendation and included a more detailed plan for a complete inspection system in the U.S.S.R., Eisenhower told him that it would be "a very hard problem to find either the money or the manpower to carry out such an elaborate inspection system." In the president's view, the Americans could do "a pretty reasonable job if the inspection was confined initially to aerial reconnaissance." See Minutes from NSC Meeting, December 22, 1955, NCS Series, Folder: 271st meeting of the NSC, AWF, DDEL, Abilene.
in the inspection issue and Strauss' public relations idea than he did in any significant revision of U.S. policies.

The president's lack of commitment to serious arms control was revealed at the Four Power Conference in Geneva, the first summit meeting since Potsdam. It began in what was termed the "spirit of Geneva," the improved international atmosphere that followed the signing of the Austrian Treaty and enveloped the summit. From July 18 to the 23, the Big Four (the United States, Britain, France and the Soviet Union) met to discuss several important issues such as European security arrangements, German reunification, and disarmament.

On July 20, Eisenhower met with Marshal Zhukov. During this conversation, Zhukov stated that the Soviet leaders and their people desired to restore close and friendly relations with the U.S. Despite Western fears, no one in the Soviet Union had any desire to attack the West, or any other country for that matter. The main task of the Soviet Union was not to wage war (indeed, they were "fed up to the teeth with war") but rather to improve the economy and raise the living standard of the people. Although the Soviet Union would continue to protect its security, armaments had become a burden on its economy. Therefore, Zhukov hoped that the U.S. and the U.S.S.R. could "work very seriously towards a détente." While he realized that the U.S. was a rich country, he imagined that the people there would also welcome a

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57 Holloway, *Stalin and the Bomb*, 341.
relief from the arms burden.\textsuperscript{58}

Rather than respond directly to these comments, Eisenhower shifted the focus to one of his main preoccupations, the question of inspection. In his opinion, the first step toward any disarmament agreement would be the creation of a demonstrably effective system of inspection. He realized that not everything could be inspected since it was relatively easy to hide bombs, but it was very difficult to conceal large military installations such as airfields, long-range bombers and guided missile factories. Zhukov agreed that inspection was an important element in any agreement, but he suggested that the main focus should be on the reduction, and eventual elimination, of armed forces and armaments, including atomic and hydrogen weapons.\textsuperscript{59}

The different emphases in the arguments made by the two leaders during this conversation foreshadowed the differences that would emerge in the formal proposals that the U.S. and the U.S.S.R. tabled the following day. When Stassen presented his arms control proposal to the president in June, he had recommended that the "best public relations will flow from genuine negotiations, rather than from unrealistic or over-dramatized presentations to the public." But Eisenhower chose to ignore this advice, as was evidenced by his proposal to the Soviets at the summit. As Evangelista observes, that proposal

\textsuperscript{58} Memo of Conversation between President Eisenhower, Ambassador Bohlen and Marshal Zhukov, July 20, 1955, International Meetings Series, Folder: Geneva Conference, AWF, DDEL, Abilene.

\textsuperscript{59} Ibid.
"certainly made for good public relations, but it offered little room for compromise." In a presentation on July 21, Eisenhower stated that his government was prepared to enter into a sound and reliable accord that would make possible the reduction of armaments. However, the "lessons of history" had taught that disarmament agreements without inspection increased the dangers of war. Addressing himself directly to the Soviet delegates, Eisenhower then proposed his "Open Skies" plan: each country would give the other a "complete blueprint of its military establishments, from beginning to end," and also allow the other aerial reconnaissance flights over its territory. Soviet Premier Nikolai Bulganin tabled a very different proposal whereby all four countries would agree to reduce the level of their armed forces and armaments, stop testing nuclear weapons, and work towards the abolition of all such weapons. An effective international control system would also be established to ensure the implementation of these measures.

Given the different nature of these two plans, it is not surprising that the Americans and Soviets reached no common ground on disarmament at Geneva. Even so, a number of

60 Evangelista, "Disarmament Negotiations in the 1950s," 21.

61 Full texts of the proposals tabled by Eisenhower and Bulganin on July 21 were published in the New York Times the following day. They are also found in the International Meetings Series, Folder: Geneva Conference, AWF, DDEL, Abilene.

62 The U.S. and the U.S.S.R. also failed to reach agreement on the problem of Germany. Whereas the Soviets insisted that they would not be able to tolerate reunification unless Germany remained neutral and outside the North Atlantic Treaty Organization, the Americans wanted Germany rearmed and inside NATO. See Pruessen, "Beyond the Cold War," 72-3.
historians have viewed "Open Skies" as a genuine arms control proposal. Ambrose contends that Eisenhower made the offer sincerely, while Appleby asserts that it was a "serious proposal that Eisenhower hoped would lead eventually to substantive arms control initiatives." In Divine's view, the president believed that his offer would provide the "catalyst for a comprehensive agreement on arms control." Similarly, Hewlett and Holl suggest that Eisenhower envisioned his proposal as a "confidence-building first step toward ending the arms race." Finally, Walt Rostow concludes that "the evidence is firm that Eisenhower viewed Open Skies, in his own phrase, as an idea that might 'open a tiny gate in the disarmament fence,' and there is not the slightest doubt that he took arms control very seriously indeed."

The archival documents undermine this positive interpretation, however. According to a memo written by Secretary Dulles prior to the Four Power Conference, the president intended to "avoid dealing with matters of substance" in Geneva. He purposefully held down the size of the American delegation "so as to avoid persons whose presence would suggest an intention to make substantive decisions and create hopes in

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64 Divine, *Blowing on the Wind*, 63.


Similarly, the minutes from a meeting of U.S. officials held in Geneva on the day before the president made his proposal indicate that he knew that the Soviets would reject it. Eisenhower predicted that mutual overflights and photographs would prove unacceptable to the Soviets because they already had the means to ascertain the location of American installations, so as a result overflights would "undoubtedly benefit us more than them because we know very little about their installations." In 1964, Eisenhower told an interviewer who asked about "Open Skies": "We knew the Soviets wouldn't accept it. We were sure of that."

As Eisenhower predicted, the Soviets rejected "Open Skies." From Khrushchev's perspective, the offer looked like an attempt by the United States to gain acceptance for spy missions over the Soviet Union. On September 20, Bulganin sent a memo to the president outlining some of the weaknesses of the plan. The American proposal had omitted the fact that both the U.S. and the U.S.S.R. had military installations and forces located outside of their national boundaries. Moreover, the Soviet leader did not

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67 Memo of Conversation between Secretary Dulles and Senator Knowland, May 23, 1955, General Correspondence and Memoranda Series, John Foster Dulles Papers, DDEL, Abilene.


70 Holloway, Stalin and the Bomb, 341.
see how the American plan could do anything to get the
arms race off "dead center." Eisenhower's address
placed no emphasis on the necessity of reducing nuclear arms.
Since the proposal would not lighten the burden of the arms race,
questions naturally arose about the real purpose of the aerial
photography that it called for. 71

On September 24, while on vacation, Eisenhower suffered his
first heart attack. Consequently, he informed Bulganin in
October that he would not be able to respond to his memo right
away. He did suggest, rather vaguely, that the American proposal
would facilitate progress in the areas of inspection, controls
and reductions of armaments. 72

The administration's attitude towards disarmament, which was
reflected in the "Open Skies" proposal, made it highly unlikely
that it would seriously consider a ban on nuclear tests. During
a meeting of the National Security Council in October, the
Chairman of the JCS explained that the NSC had come to the
consensus (during the past ten years) that it was unrealistic to
imagine that nuclear weapons could be banned or even limited.
Because it was understood that the "security of the United States
depended on these weapons," the U.S., during any discussions
about disarmament, had to be careful to avoid any moves which
would undermine this consensus. Secretary Dulles remarked that

71 Telegram from Bulganin to Eisenhower, Dulles and Stassen,
September 20, 1955, Dulles-Herter Series, AWF, DDEL, Abilene.

72 President's responses to Bulganin, October 10-11, 1955,
Dulles-Herter Series, AWF, DDEL, Abilene.
this American stance put the government in "something of a dilemma." All along it had invoked the inspection argument as the chief reason for not reaching an agreement with the Soviets. If this problem was resolved (i.e., if a suitable technical arrangement could be devised and the Soviets agreed to it), then the U.S. ran the risk of having its "entire position exposed." From his perspective, the secretary of state did not feel able, given the political and public relations implications, to stand up and say to the world that the American position was that "nuclear weapons are here to stay forever."  

While the State Department and Pentagon continued to spar over nuclear arms control policy, AEC Commissioner Thomas Murray stepped up the pressure on the administration to consent to a testing moratorium. In several letters to the president, Murray requested more information on the positions of the various bureaucracies involved in the decision-making process related to testing policies. On October 14, he learned from the President's Special Assistant, Dillon Anderson, that these positions were confidential and were intended only for the president's consideration. Since he was not getting anywhere by going through official channels, Murray took his case to the

73 NSC Memo, October 13, 1955, NSC Series, Folder: 261st Meeting of the NSC, AWF, DDEL, Abilene.

74 Letter from Thomas E. Murray, AEC Commissioner, to Dillon Anderson, Special Assistant to the President, October 13, 1955, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.

75 Reply from Dillon Anderson to Thomas Murray, October 14, 1955, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.
press. On November 17, in a statement highly critical of the AEC's testing policies, he emphasized the secret nature of American explosions. In order to improve the public's understanding of the power of nuclear tests, Murray proposed the convening of a global "Atomic Summit" at the Bikini-Eniwetok Proving Grounds where thousands of representatives from around the world would observe the detonation of large thermonuclear weapons.  

Murray's statement excited considerable alarm within the State Department, which learned about it only after its release to the press. In an effort to contain the political damage, the department immediately sent out telegrams to its embassies (with special attention to the one in Tokyo), emphasizing that Murray's statement represented "only his own personal views and was not (repeat not) cleared in advance with any of the government agencies involved." Although Murray's proposal received considerable attention from the press, the AEC, as Divine puts it, "quickly scotched the proposal for a public nuclear test." Nevertheless, the President's Special Assistant for Disarmament also attempted to get the administration to change its position. During a meeting of the National Security Council on November 1, Stassen reiterated his support for a disarmament agreement which

76 Telegram from Herbert Hoover, Acting Secretary of State, to the American Embassy in Tokyo, November 17, 1955, DSRG 59, 711.5611/11-1755, NA, Washington.

77 Ibid.

78 Divine, Blowing on the Wind, 71.
would include a ban on nuclear testing.  

International pressure in favour of an end to testing also continued. In a radio broadcast on November 29, Soviet representative Nikolai Andreyev repeated the U.S.S.R.'s call for a ban on testing. Having exploded their most powerful H-Bomb three days earlier, the Soviets offered to stop all further testing of nuclear weapons, if the United States and Britain agreed to do the same.  

Although this was not a novel proposal (the French and Indian governments had made similar suggestions in 1954), it was the first time that the Soviet Union offered to accept a moratorium prior to, and separate from, a comprehensive disarmament agreement.  

On December 2, the Indian delegate, V.K. Krishna, submitted a resolution to the UNGA's Political Committee calling for an immediate halt to all nuclear weapons testing, and a few days later the Soviet delegate, First Deputy Foreign Minister Vasily Kuznetsov, endorsed the proposal.  

Why did the Soviet Union support the Indian proposal at this

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82 Although the GA did not adopt the Indian resolution, on December 3, it unanimously accepted a much more moderate resolution (Resolution 913) which called for the establishment of a scientific committee (consisting of Australia, Brazil, Canada, Czechoslovakia, France, India, Japan, Sweden, the Soviet Union, the U.K. and the U.S.) to study the effects of radiation on human health. This committee would receive and assemble information on radiation furnished to it by the member states. See the edit. note in *FRUS, 1955-57*, XX: 234-5.
particular time? In addition to the economic considerations detailed in June, a State Department intelligence report suggested some further motivating factors. Moscow might have been attempting to counter the adverse effects on world opinion of its own tests, particularly opinion in Asia. As well, the Soviet Union might have calculated that the "West was not prepared under any circumstances to accept ... a ban on tests and that therefore it could safely attempt to exploit popular concern." And finally, the Soviets might have genuinely hoped that a ban on tests would heighten the pressure on the West to accept a more extensive prohibition of nuclear weapons.  

In addition to the pressure from the Soviet Union and India, Pope Pius XII also called on the great powers to end nuclear testing.  

Despite the growing international support for the Indian proposal, however, the State Department instructed the American delegates at the UN Disarmament discussions not to alter the official U.S. stance that "a moratorium was an inseparable part of the disarmament problem and could not be dealt with alone." Furthermore, any disarmament agreement had to be "predicated on equitable and effective inspection and control.

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83 Department of State Intelligence Report, "Recent Soviet Bloc Statements on the Banning of Nuclear Weapons Tests," December 12, 1955, Series III, WHOSAD, DDEL, Abilene. This report also pointed out that the Soviets had made several moves towards conventional disarmament by reducing its national strength by 640,000 men and abolishing some of its military bases (for example at Port Arthur in the Far East).

84 Hewlett and Holl, Atoms for Peace and War, 304.
At a press conference on November 29, Secretary Dulles rejected the Soviet proposal outright, explaining that although the Eisenhower administration had been studying the question of a moratorium for a long time it had not yet found any formula for an agreement on testing that was both dependable and in the interests of the U.S. He added that "interests" referred "not only to our national interest, but also to the interest that we have in protecting peace and freedom in the world."  

The official British reaction to the Soviet announcement was similar to the American. Whereas some sectors of the British press and the Labour Opposition supported the idea of a moratorium, the Conservative government rebuffed it. Having committed itself in 1954 to the development of a hydrogen bomb, the U.K. felt an urgent need to continue testing, given the possibility that the increasing demand in Britain and elsewhere for a test ban might reach fruition in the near future. When the issue was raised in the House, the new Prime Minister, Anthony Eden, emphasized the "intricate" control aspects of any

85 Telegram from the Department of State to the Mission at the UN, November 1, 1955, WHOSAD, DDEL, Abilene. This telegram is also found in FRUS, 1955-57, XX: 234.

86 Excerpt from News Conference by John Foster Dulles, November 29, 1955; and Telegram from Dulles to the American Embassy in Moscow, December 2, 1955; both found in Series III, WHOSAD, DDEL, Abilene.

87 Two telegrams from the American Embassy in London to the State Department, November 30, 1955, Series III, WHOSAD, DDEL; and Department of State Intelligence Report, December 12, 1955, Series III, WHOSAD, DDEL, Abilene.

agreement to stop testing and linked such an accord to a comprehensive disarmament treaty. Eden likewise offered assurance that the "consensus of informed opinion" saw no danger to human health in the increased radiation levels caused by all the nuclear tests to date.  

Nevertheless, Eden was under considerable pressure from the opposition and the public to change his government's policies regarding testing and disarmament. In December, he sent a private message to the State Department which hinted that the British stance on testing might undergo change in the future. The prime minister instructed Roger Makins, the British ambassador in Washington, to make sure that the "matter of nuclear tests" was added to the agenda for an upcoming visit in the new year with the president in the U.S..  

Although the British government publicly supported the American position on testing, the Indian government's Resolution (and the Soviet support for it) continued to complicate the

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89 Note from Sir Robert Hakins to the State Department, November 30, 1955, Series III, WHOSAD, DDEL, Abilene. A more detailed description of the debate which took place in Parliament on November 30 can be found in a Telegram from the American Embassy in London to the Secretary of State, December 2, 1955, Series III, WHOSAD, DDEL, Abilene.


91 Memo from Douglas MacArthur II, Duty Officer, State Department, to the Secretary of State, December 31, 1955, DSRG 59, 711.5611/12-3155, NA, Washington.
Eisenhower administration's policies in the winter of 1955-56. At about the same time that India introduced its moratorium proposal, the AEC and the DOD decided to make an early announcement of the next series of American tests in the Pacific, planned for the spring of 1956. Both agencies viewed the tests as necessary for the U.S. to "perfect the defense of the free world against aggression." However, the State Department worried about the political consequences of the proposed announcement. The Embassy in Tokyo had asked for a delay in the announcement because both popular and official opinion in Japan were still sensitive about the negative effects of earlier tests. Furthermore, many in the State Department judged that the timing of such an announcement was poor since it would complicate the problems faced by the American delegation in "disposing of the Indian resolution" at the UNGA. Therefore, State recommended postponing the announcement, at least until after the secretary of state or president issued a policy statement. Echoing the advice of the United States Information Agency, the department recommended that the announcement provide the maximum possible reassurance to overseas populations about the U.S. testing programs. Not only should it underscore the defensive nature of American nuclear weapons, it should stress that the fallout in the areas removed from the immediate testing ground was


93 Letter from the Assistant Secretary of State to the Secretary of State, December 2, 1955, Series III, WHOSAD, DDEL, Abilene.
equivalent to only a "small fraction of the background radiation constantly emanating from the earth and atmosphere."°

As a result of the state department's objections, the AEC agreed to delay the announcement about its next series of tests. In doing so, it reiterated to both Stassen and the State Department its unequivocal opposition to a moratorium. Strauss expressed his serious concern about the Soviet political and propaganda campaign against testing, a "coldly calculated maneuver to overcome American nuclear weapons superiority, which stood as the principal deterrent to aggression by the Communists aimed at the subjugation [of the U.S.] and the domination of the world." If the U.S. accepted a moratorium, he predicted that the Russians would then "deliberately stretch out subsequent disarmament negotiations over a period of years while surreptitiously increasing their own war potential."

Furthermore, Strauss worried about the status of the American weapons programs if the United States embraced the Indian proposal since it would be very difficult to maintain the laboratories and scientists involved in these programs if testing ceased. Influenced by these considerations, the AEC (without Murray's agreement) recommended to the State Department that the American position should remain one of "aggressive opposition" to a moratorium on the testing of nuclear weapons "except as part of

° Memo from the Deputy Director of the USIA, Abbott Washburn, to the AEC, December 31, 1955, DSRG 59, 711.5611/1-355, NA; and Memo from Douglas MacArthur II, Duty Officer for the State Department, to the Secretary of State, January 3, 1956, DSRG 59, 711.5611/1-355, NA, Washington.
the final phase of a comprehensive program for the limitation of armaments."

Thus, in 1955, the United States missed an opportunity to respond positively to important shifts in Soviet policy. As the U.S.S.R. became more flexible in its approach to the West, the American policy on testing and disarmament remained basically unchanged. As before, the Eisenhower administration was divided regarding the merits of nuclear arms control and a moratorium. Unconcerned about the nuclear arms race, and convinced that the Russians were wholly untrustworthy, the AEC, DOD, and JCS were unanimously opposed to any agreements in this area with the Soviet Union without a radical transformation in its international behaviour. More sensitive to both the growing anti-testing sentiment throughout the world and the significant changes in Soviet policy, the Secretary of State and the President's new Assistant for Disarmament Affairs recommended a revision of U.S. policies on disarmament and testing. Although Eisenhower seemed to appreciate the political arguments put forward by Dulles and Stassen, he ultimately sided with the defence bureaucracies and proposed a plan at Geneva, "Open Skies," which he knew the Soviets would reject. In the aftermath of the Four Power conference, divisions persisted within the administration while international support for a moratorium

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95 Letter from Lewis Strauss to Governor Stassen, December 2, 1955, 00221, NSA, Washington; and Memo from Strauss to the Secretary of State, December 13, 1955, Series III, WHOSAD, DDEL, Abilene.
continued to rise. Nevertheless, the president approved the next series of American nuclear tests to be conducted by the AEC in the Pacific Proving Grounds in the spring of 1956.
Chapter Six

NEW TESTS IN THE PACIFIC STIMULATE PROTESTS AT HOME AND ABROAD

A new series of nuclear explosions in the Marshall Islands, known as "Operation Redwing," incited protest against the United States both at home and abroad in 1956. During the year, nuclear testing for the first time became an important issue in American domestic politics when it was introduced into the presidential election campaign by the Democratic candidate, Adlai Stevenson. International demands for a moratorium also grew, especially in those areas of Asia and the Pacific most directly affected by American and British tests such as Japan, India, Indonesia, the Marshall Islands, and Western Samoa. Like a growing number of Americans, people in these locations worried about the effects of radioactive fallout on their health, safety, environment and livelihoods. This growing international and domestic political pressure had no impact on the American program in the Pacific, however. As the United States proceeded with "Redwing," government officials assured American and world opinion that the tests were both harmless and necessary for the defense of the "Free World."

On March 1, the United States announced that it would be conducting Operation "Redwing" between May 5 and July 22. During this period, seventeen shots would be detonated at Bikini Atoll
and eleven at Enewitok.\textsuperscript{1} Because of the political problems caused by its earlier tests in the Pacific (particularly in the spring of 1954), the American government gave advance notice of this series to some countries such as Japan and India.\textsuperscript{2} In these earlier notices, which were sent out during the first week of January, the U.S. emphasized the necessity of improving American military strength for the "purposes of peace." The main justification for the new series was the "further development of methods of defense against nuclear attack."\textsuperscript{3}

Although the administration stressed the "defensive" nature of its tests, the "Redwing" series also included the first airdrop experiment involving a multimegaton thermonuclear weapon which was exploded 15,000 feet over Namu Island at Bikini. Unfortunately, through navigational error, the pilot missed his target by four miles. According to Hewlett and Holl, the "miss was of little consequence from either a military, diagnostic or safety point of view" since the fallout "drifted northward over uninhabited ocean." Nevertheless, as they point out: "In

\textsuperscript{1} \textit{FRUS, 1955-57}, Edit. Note, XX: 392.

\textsuperscript{2} In order to minimize the world news coverage of the tests, the government decided to exclude foreign news representatives from Operation "Redwing". See OCB Minutes, March 9, 1956, OCB Central Files Series, WHO,NSC Staff: Papers, DDEL, Abilene.

multimegaton thermonuclear weaponry, a four-mile error did not mean that the target remained undamaged."

Given the possibility of errors like this, combined with their past experience, it is understandable that the announcement by the American government stimulated uneasiness and touched off a new round of protests in the Asia-Pacific region. Based on their negative experience with the 1954 series of American nuclear tests, the Marshallese were especially concerned about the health and environmental implications of the "Redwing" series. As a result of these concerns, the State Department was certain that the issue of testing would arise during the session of the UN Trusteeship Council which would convene in February 1956. Several members of the Council had already asked questions about the U.S. program. What steps were being taken to protect the inhabitants of the Trust Territory, such as the recently returned inhabitants of Uterik? To what extent did nuclear tests contaminate the ocean, lagoons, and islands in the area? What methods were used to decontaminate these areas after the tests? Was not the testing of large scale nuclear weapons incompatible with the obligations of the United States under the Trusteeship Agreement and the UN Charter? (Resolution 1082 XIV obligated the U.S. to protect the inhabitants of the Trust Territory from ill effects.) What authority did the United States have to close

\footnote{This shot took place on May 21. See Richard Hewlett and Jack Holl, \textit{Atoms for Peace and War, 1953-61} (Berkeley, 1989), 345.}

\footnote{The Trust Territory included numerous islands scattered across 3,000,000 square miles of ocean.}
large areas of the ocean for these tests? And even if they did have the right to establish large control areas over the high seas, did this include the right to contaminate international waters and marine life?⁶

In order to prepare the American delegation for the Trusteeship Council meeting, the State Department made several recommendations. If a member of the Council raised questions about testing during the session, the American representatives should not refuse to consider the matter; however, the delegates should make it clear that the U.S. would oppose any proposal to prohibit future tests of nuclear weapons in the Trust Territory, explaining that the question was being handled in other UN organs as part of the general disarmament problem. If questions arose about the right of the United States to use these areas for its own purposes, the delegation should emphasize that the interests of the U.S. and the rest of the "free world" required that these tests be carried out. There was "no doubt" that the American government had the legal right to conduct these tests. After all, according to Article 84 of the UN Charter and Article 5 of the Trusteeship Agreement, the Administering Authority was expected to "insure that the Trust Territory play its role in the maintenance of international peace and security." The U.S. could argue, therefore, that it was "clearly entitled" to use the area for its nuclear tests. Perhaps recognizing that this argument

was a little flimsy, the department also recommended that the
delegation oppose any proposal made at the Council which asked
the International Court of Justice for an advisory opinion on the
legality of testing in the Pacific Islands.\(^7\)

On March 9, a petition was sent to the Seventeenth UN
Trusteeship Council from the Marshallese (signed by twelve
members of Congress). In this document the Marshallese
reiterated a demand made on April 20, 1954 that all nuclear
experiments in the Trust Territory should immediately cease or,
if the tests were judged "absolutely necessary for the well-being
of all the people of the world," that all precautionary measures
be taken. In addition, the Marshallese complained that, although
the United States had evacuated the Rongelap victims after the
1954 tests, the arrangements made for them had proven
unsatisfactory. They continued to suffer because of the loss of
their lands and homes. Although the psychological damage to
these people might already be "irreparable," the Marshallese asked

\(^7\) A proceeding before this court would result in heightened
attention being brought to the matter, which, from the "U.S.
standpoint, should receive as little world discussion as
possible." Despite the "strong legal position" of the United
States, the Court might be tempted to hand down an adverse
opinion, "motivated, at least in part, by political
considerations." If the opinion were not in favour of the United
States, it was possible that the Trusteeship Council would pass a
resolution calling for an end to testing. Furthermore, an
adverse opinion would be embarrassing and awkward for the
American government. Although the U.S. would not be willing to
discontinue tests based on the advice of the court, the
continuation of testing would be made much more difficult due to
the "public relations problems." See Office Memo, Special Item
F: "Cessation of Nuclear Weapons Tests in the Trust Territory of
the Pacific Islands," January 25, 1956, Series III, Folder:
Nuclear Weapons Tests, WHOSAD, DDEL, Abilene.
that the UN take some action to remedy the situation.  

During its Eighteenth Session, the Trusteeship Council adopted a resolution urging the U.S. to take necessary measures to guard against the dangers inherent in nuclear testing. This led to a debate during which the Soviet delegate challenged the right of the U.S. to conduct nuclear tests outside its own borders. In response, the American representative at the Council, Mason Sears, argued that the American tests in the Pacific were justified, paradoxically, on the grounds that they were leading the world closer to peace. Because of the power of the American tests, the "whole world had come to understand that a third world war might destroy the human race." Thus, Sears explained, rather than causing harm, the U.S. testing program might actually prove to be "one of the greatest contributions ... ever made to the welfare of mankind." In a note to the president, Un ambassador Henry Cabot Lodge gave Sears high praise.

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8 Petition from the Marshallese Congress, Seventeenth Session, Agenda Item 4, UN Trusteeship Council, March 28, 1956, F0371/123137, PRO, Kew; Telegram from Department of State to American Delegation at the UN in New York, March 19, 1956, DSRG 59, 711.5611/3-2056, NA, Washington. In November, the High Commissioner of the Trust Territory announced that the U.S. had granted a cash settlement to the former residents of Bikini and Eniwetok, who had been moved to Kili and Ujelung islands respectively, because of the tests. In return, the United States was given the land-use rights of Bikini and Eniwetok. See Press Release, November 25, 1956, DSRG 59, 711.5611/12-1056, NA, Washington.

9 Supplementary Brief, Trusteeship Council, Eighteenth Session, June 1956, F0371/123137, PRO, Kew.

10 Note from H.C. Lodge at the UN in N.Y. to the President, June 28, 1956, Admin. Series, Folder: Henry Cabot Lodge (1), AWF, DDEL, Abilene.
for his remarks at the Trusteeship Council. In his opinion, Sears "came off with flying colors on what has always been a prickly issue for the U.S." Eisenhower agreed, adding that he might someday "borrow [Sears'] phraseology" if confronted with a similar question during a press conference.\[^{11}\]

In Japan, reactions to the American testing program were overwhelmingly negative. A USIA poll found that 86% of the general public (and 94% of the college-educated) disapproved of the American tests.\[^{12}\] Many worried about the adverse effects of the tests on the fishing industry. On January 25, Ambassador Iguchi sent a formal note to the State Department requesting guarantees that compensation would be paid for any damage to Japanese fishing interests caused by "Redwing."\[^{13}\] On February 8, Morisaburo Seki, the Counselor at the Embassy, explained to the State Department why this request had been made. The Japanese believed that the tests would result in substantial economic losses for the fishermen. They would not be able to fish in the restricted area, they would have to take extra time to navigate around the area, and they would suffer losses after the tests were completed because of contaminated fish. In Seki's view, there were several ways that Washington could ease the tensions

\[^{11}\] Note from the President to H.C. Lodge, July 2, 1956, Admin. Series, Folder: Henry Cabot Lodge (1), AWF, DDEL, Abilene.


\[^{13}\] Office Memo from Howard Parsons to Mr. Sebald, March 2, 1956, DSRG 59, 711.5611/1-2556, NA, Washington.
caused by the planned tests. Prior to the tests, the government could consult with the Japanese fishing interests regarding the area that was to be restricted. It could set up a joint U.S.-Japanese scientific study to set standards for determining dangerous levels of radioactivity. It could also agree to pay compensation to the fishermen for losses incurred by the tests. In making these recommendations, Seki stressed that they were "of great political importance" in improving Japanese-American relations. The State Department did not respond positively to these suggestions, however. It rejected the first two and explained that the third -- the issue of compensation -- was being carefully studied by the government. It also reminded Seki that the U.S. government had not accepted the principle of legal liability in connection with the 1954 Bikini tests.14

On February 14, both houses of the Japanese Diet passed a unanimous resolution urging the United States, Britain and the Soviet Union to suspend all nuclear tests. In view of the political problems caused by this resolution the American embassy in Tokyo advised the White House to give "urgent consideration" to the problem of compensation to the fishermen. From its perspective, the "snow-balling of anti-nuclear test publicity" indicated that the new test series was going to create serious political problems for the U.S. "even without a repetition of the Fukuryu Maryu incident." Although cognizant of the legal

14 Memo of Conversation between Morisaburo Seki, Counselor at the Japanese Embassy, and representatives of the State Department, Noel Hemmendinger and Harry Pfeiffer, February 8, 1956, DSRG 59, 711.5611/2-856, NA, Washington.
implications, the embassy recommended that the issue be dealt with on "a political level divorced from questions of legal liability." If the American government would agree to provide even a limited amount of compensation to the Japanese, it would be of "maximum positive usefulness in calming public opinion and government pressure on the U.S." In its reply, the State Department informed the embassy that the issue was still under study. It also advised the ambassador to try and "get across" to the public and to the government in Japan that the tests were being carried out in the "interests of the free world." Allison did not welcome this advice. According to him, the embassy was doing its utmost to explain that the tests were in the "interests of the free world," but this emphasis "did not (repeat not) appear currently acceptable to the Japanese as a sufficient explanation" for testing. The Japanese were tired of hearing the Americans talk about the military aspects of defending the "free world." They were still fearful about nuclear weapons and they anticipated direct losses from the American series. If the United States was determined to continue to test outside its own territory, it should at least pay

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15 Telegram from American Embassy in Tokyo to the Secretary of State, February 22, 1956, DSRG 59, 711.5611/2-2256, NA, Washington. This telegram is also found in FRUS, 1955-57, XX: 343-5.

16 Telegram from Secretary Dulles to the American Embassy in Tokyo, February 23, 1956, DSRG 59, 711.5611/2-2456, NA, Washington.
compensation for damage done to the Japanese fishing industry.\(^\text{17}\)

On March 6, the Socialist Party in Japan sent a letter to the American embassy in Tokyo expressing its regret that the United States had not complied with the Diet resolution passed in February. Given the considerable importance of the resolution in Japanese eyes, Allison recommended that Washington respond to the letter in a carefully worded but sympathetic manner. The State Department rejected this advice, however, on the grounds that such a reply would give the Socialists a "further opportunity to criticize both the American and Japanese governments."\(^\text{18}\) In response, Allison warned that the Japanese government would continue to press hard on both the Diet resolution and the issue of compensation. In addition, there had been much protest from non-governmental groups like the Seamen's Union, a group which merited attention, in the ambassador's opinion, since it was friendly, strongly anti-communist and directly affected by the tests. In a letter to the embassy, the union had protested the ever increasing hazards of nuclear explosions and the restrictions placed on the fishing industry. It asked the U.S. to cancel the tests in the Eniwetok area.\(^\text{19}\)

\(^\text{17}\) Telegram from American Embassy in Tokyo to the Secretary of State, February 28, 1956, DSRG 59, 711.5611/2-2856, NA, Washington.

\(^\text{18}\) Telegram from the American Embassy in Tokyo to the Secretary of State, March 7, 1956, DSRG59, 711.5611/3-756, NA; Telegram from Department of State to American Embassy in Tokyo, March 9, 1956, DSRG 59, 711.5611/3-756, NA, Washington.

\(^\text{19}\) Telegram from the American Embassy in Tokyo to the Department of State, March 12, 1956, DSRG 59, 711.5611/3-1256, NA, Washington. Later, the Federation of Japanese Tuna
As a result of the growing opposition in Japan, Allison advised the secretary of state that he should be prepared to explain the American position on testing to the Japanese and recommended that Washington reply positively to their demands for compensation. As was often the case, the State Department rejected the embassy's sound advice. Instead, in a note informing the Japanese of the new Pacific series, the U.S. reiterated its familiar justifications for testing and asserted the right to conduct such tests as a matter of international maritime tradition. Since military "exercises" were a traditional use of the high seas, the United States considered that the "inconvenience ... which might result therefrom was not compensable as a matter of right."21

Not surprisingly, the Japanese government was not satisfied with these arguments. In a formal reply on May 4, Japan requested that the U.S. make further efforts to bring about the cessation of all nuclear tests, basing this request on a number of premises. First, although the American administration had

Fishermen's Cooperative Associations also urged the American government to abandon nuclear testing. See Telegram from the Federation to President Eisenhower, July 20, 1956, DSRG 59, 711.5611/7-2056, NA, Washington.

20 Telegram from the American Embassy in Tokyo to the Department of State, March 12, 1956, DSRG 59, 711.5611/3-1256, NA, Washington.

21 The note was sent on March 19. Telegram from the Department of State to the American Embassy in Tokyo, March 13, 1956, DSRG 59, 711.5611/3-1256, NA; Telegram from the Department of State to the American Embassy in Tokyo, March 16, 1956, DSRG 59, 711.5611/3-1656, NA; U.S. Government Office Memo from Noel Hemmendinger to Mr. Sebald, May 4, 1956, DSRG 59, 711.5611/1-2556, NA, Washington.
stated that no health hazard would result from the tests, past experience led the Japanese to conclude otherwise.\textsuperscript{22} Besides that, the Japanese worried that dangerous radioactivity might remain in the restricted area after the next series of tests was completed and spread to the surrounding areas. Fears about this radioactivity could only increase the feelings of anxiety in the Japanese people, since a large proportion of them relied primarily upon marine products for their protein supply. Secondly, the U.S. had concluded that no economic losses would result from the establishment of the danger area. However, the restriction of this large area would force the Japanese fishing vessels to make detours, change fishing grounds, and in some cases, suspend fishing operations altogether. With the last series of tests in the Pacific, thousands of tons of fish had been destroyed and fish prices and exports had dropped considerably. Thirdly, the Americans had argued that they had a legitimate right to conduct tests in the Pacific since they were included in the category of military exercises under international law. But the Japanese believed that this was a weak argument for a number of reasons. Military exercises, such as fleet maneuvers, had been traditionally acceptable under international law because they were held for short periods of time in limited areas and did not interfere with the marine

activities (e.g., fishing, shipping) of other nations. But since the proposed American tests involved an extensive area over an extended period of time, it was not clear that the same legal principles which applied to military exercises could be applied to nuclear explosions. Similarly, it was not clear that a state could unilaterally establish a danger area and then exempt itself from liability for any damage or losses sustained by the tests. Therefore, the Japanese government believed that it had the right under international law to claim compensation for all damages and economic losses incurred as a result of the American tests.\textsuperscript{23}

In private remarks to Allison, Foreign Minister Shigemitsu indicated a more conciliatory attitude on the part of the Japanese government than had been expressed in its note of May 4. Explaining that the note was intended to placate the Diet rather than antagonize the United States, he stated that Japan "had no desire in any way to interfere with programs deemed proper by the Americans."\textsuperscript{24} Indeed, his government was even prepared to publicly announce a recent Cabinet decision that no radiological monitoring of incoming planes, vessels or fish would take place during the tests. This decision stemmed from American assurances

\textsuperscript{23} Memo of Conversation between Mr. Shigenobu, Chargé d'Affaires, Japanese Embassy, and William Sebald, Assistant Secretary for Far Eastern Affairs, State Department, May 4, 1956, DSRG 59, 711.5611/5-456, NA. See also Department of State Memo of Conversation between Minister Shima and Howard Parsons, Acting Deputy Director, May 3, 1956, DSRG 59, 711.5611/1-2556, NA, Washington.

\textsuperscript{24} Telegram from the American Embassy in Tokyo to the Secretary of State, May 10, 1956, DSRG 59, 711.5611/5-1056, NA, Washington.
that the tests posed no health hazards to the Japanese people.\textsuperscript{25}

Evidence which became available during the Pacific tests indicated, however, that the Japanese people could not rely on assurances from either their government or the United States. On June 5, the United Press reported that the freighter Mizuko Maru had reached the port of Niihama with a high radioactive count and that two seamen on board had low blood counts.\textsuperscript{26} On June 12, the Scientific Attaché at the Japanese Embassy, Dr. Takashi Mukaibo, called at the State Department after his government learned that the Food and Drug Administration was conducting radioactivity checks of the fish entering West Coast ports. Since Washington maintained that no economic or health damages would result from the Pacific tests, he found this monitoring to be inconsistent, to say the least. It was also worrying, since the Japanese government had adopted the policy of not monitoring the fish entering its ports for radioactivity on the basis of American assurances. Minimizing these concerns, the Officer in Charge of Japanese Affairs, James V. Martin, explained that the monitoring of fish was a routine procedure, designed to "protect the American public from any possible contamination of food on the open markets regardless of how remote or unlikely." Unpersuaded,

\textsuperscript{25} Telegram from the American Embassy in Tokyo to the Secretary of State, May 11, 1956, DSRG 59, 711.5611/5-1156, NA, Washington.

\textsuperscript{26} Telegram from the Secretary of State to the American Embassy in Tokyo, June 5, 1956, DSRG 59, 711.5611/6-556, NA, Washington. See also OCB memo from Hirsch to Staats, June 5, 1956, OCB Central Files Series, WHO, NSC Staff: Papers, DDEL, Abilene.
Mukaibo asked for more information about the checks being carried out by the Food and Drug Administration. He also wanted the Atomic Energy Commission to supply more specific data about the amount of radiation released into the air during the tests. In its public statements, the AEC had only spoken about the average amount of radiation received by the whole population of the U.S. after its tests.\textsuperscript{27} It had not spoken about the specific doses of radiation received by the people in the Pacific and in the United States who lived closest to the tests.\textsuperscript{28} In addition, despite the assurances made by the AEC, Japanese scientists had discovered a high level of radioactivity in the atmosphere.\textsuperscript{29}

British tests scheduled for Christmas Island also aroused

\textsuperscript{27} For example, in his public speech of 15 February 1955, the Chairman of the AEC, Lewis Strauss, argued that the "average amount of radiation received by the residents of the United States from all nuclear detonations to date had been about the same as the exposure received from one chest X-ray."\textsuperscript{27}

\textsuperscript{28} State Department Memo of Conversation, June 12, 1956, DSRG 59, 711.5611/6-1256, NA, Washington.

\textsuperscript{29} According to the findings of the Meteorological Agency and Rikkyo University, the levels of radiation in Japan had reached a "maximum tolerable limit" during and immediately after the tests. See Telegram from the Secretary of State to the American Embassy in Tokyo, September 27, 1956, DSRG 59, 711.5611/9-2756, NA; Telegram from the American Embassy in Tokyo to the Department of State, September 28, 1956, DSRG 59, 711.5611/9-2856, NA, Washington. Near the end of July, the Japanese Foreign Office provided the American Embassy in Tokyo with detailed, well-documented compensation claims for the losses incurred by the Japanese fishermen because of the tests. These losses totalled about a half a million dollars. The embassy recommended that compensation be paid promptly, since any delays would seriously disturb Japanese-American relations in "a period of critical importance in terms of American long-term objectives in Japan." By late December, the compensation had still not been paid. See Telegram from the American Embassy in Tokyo to the Secretary of State, December 22, 1956 DSRG 59, 711.56/12-2256, NA, Washington.
fears. The inhabitants of Western Samoa, located northeast of the proving ground, petitioned the UN to take action that would ensure that no harm would come to them. In its reply, the British Foreign Office took a position similar to that of the American government. It assured the Samoans that all possible precautions would be taken to avoid harm to their lives or property. On June 7, Prime Minister Eden made a statement to Parliament on the subject of the upcoming nuclear tests. According to him, a limited number of thermonuclear explosions would be carried out "in a remote part of the Pacific Ocean ... far from any inhabited islands."

Like the Eisenhower administration, however, the British government often made assurances to the public regarding the safety of its tests which it could not support with evidence. In their book, *Fields of Thunder*, Blakeway and Lloyd-Roberts describe the unsafe conditions of the U.K. tests carried out at the Monte Bello Islands. In addition, top secret documents show that the British government made public promises based on very

30 Western Samoa was a Trust Territory administered by New Zealand.

31 Extract from Note by the New Zealand Department of External Affairs, May 8-14, 1956, F0371/123137, PRO, Kew; State Department Memo and Position Paper, June 12, 1956 DSRG 59, 711.5611/6-1256, NA, Washington.

32 Letter from John Wilson, Foreign Office, to Mr. Scrivener, UN Department, June 4, 1956, F0371/123137, PRO; Reports of the Administering Authority and of the Visiting Mission to the Pacific on Western Samoa, June 1956, F0371/123137, PRO, Kew.

sketchy knowledge of the areas near the testing sites. Shortly after Eden made his statement regarding the Christmas Island tests, for example, the Foreign Office realized that it would need "facts and figures" in order to "demonstrate the truth" of the prime minister's statement. Since it did not have this information, the Foreign Office decided to measure the radiation levels on islands located a long distance from Christmas Island (e.g., at New Caledonia) after the tests. An effort was also made prior to the tests to "discretely" gather relevant information about the names and population totals of all of the permanently inhabited islands "covering the remotest possible areas that might be affected if something very serious went wrong." From Indonesia, the Central Government, Parliament and press urged Prime Minister Eden to consider the cancellation of the British thermonuclear tests planned for early 1957 on Christmas


36 Minutes of the "Grapple" Executive meeting, written by G.G. Brown, Foreign Office, August 13, 1956, FO371/123138, PRO, Kew. "Grapple" was the code-name for the test series planned for Christmas Island. Other documents show that the Foreign Office lacked basic information such as whether or not the islands were inhabited and the proportion of Europeans vs. Natives (i.e. whether they were "normally clothed and wore shoes."). See Letter from A.P. Wallington Smith, Lieutenant Commander, Task Force, "Grapple," to Miss G.G. Brown, Foreign Office, August 8, 1956, FO371/123138, PRO, Kew. See also Letter from F. Sedgwick-Jell, Colonial Office to the Foreign Office, August 16, 1956, FO371/123138, PRO; Letter from G.G. Brown, Foreign Office, to D.A. Lovelock Esq., Ministry of Supply, September 7, 1956, FO371/123138, PRO, Kew.
Island, 200 miles from Indonesia. They also asked the American representatives in Djakarta to stop testing nuclear weapons in the Pacific. These appeals were supported by the Indonesian Peace Committee and the Trade Union Congress. In its letter to the British, the Committee wrote that:

The injuries inflicted by the explosions of [nuclear] bombs ... in the past have and are still tormenting our innermost feeling, and the conscience of the whole of humanity .... We are ... confident that a similar uneasiness would arise in the British people, should [nuclear] experiments be made within the territory of Great Britain .... We therefore look forward with great confidence to Her Majesty's Government ... to do the utmost to eliminate the grievances ... to mankind, caused by the explosions of [nuclear] bombs ....

The Council of the Sugar Plantations Workers Union (representing 5,431 members) denounced the tests as "contrary to our national cause as well as to the aspirations of peace-loving people throughout the world." Apart from the question of location, the tests created anxiety in the Indonesian people who realized the "catastrophic results caused by the dreadful atomic and hydrogen explosions."

In India, where disapproval of nuclear testing was already

37 In Ambon, the Director of the Doctors Association said that the Molucca population feared that nuclear explosions on Christmas Island would poison fish which swam to North Moluccan waters. See Telegram from Djakarta to the Secretary of State, April 21, 1956, DSRG 59, 711.5611/4-2056, NA; Telegram from Djakarta to the Secretary of State, May 10, 1956, DSRG 59, 711.5611/5-1056, NA, Washington.

38 Letter from the General Secretary of the Indonesian Peace Committee to Prime Minister Anthony Eden, May 3, 1956, FO371/123137, PRO, Kew.

39 Letter from Herman Suradjhi, General Secretary of the Sugar Plantations Workers Union, Sumberhardjo, to Prime Minister Anthony Eden, June 1, 1956, FO371/123138, PRO, Kew.
widespread, press commentators were especially critical of the
new American series, finding no satisfactory reason for the
continuation of these dangerous experiments. Calcutta
newspapers reported a dramatic increase in radioactivity in the
city following the American hydrogen tests at Eniwetok and the
British tests at Monte Bello Island (located in the Indian Ocean
off the coast of Western Australia). In April, the Indian
government published an official study entitled Nuclear
Explosions and Their Effects which included information on the
effects of testing such as the contamination of fish and marine
life and the possible genetic damage to the human race. In the
foreword, Prime Minister Nehru expressed his hope that the report
would help focus people's attention on the "dreadful prospect of
war in the nuclear age and the dangers of continuing nuclear test
explosions." On July 12, India repeated its call for a

40 State Department Memo and Reply, February 8, 1956, Series
III, WHOSAD, DDEL, Abilene. In its draft reply to these
criticisms, the State Department stated that the tests would put
the United States in a better position to "defend itself against
armed aggression." Calls for bans on nuclear weapons testing
sprang in part from "unwarranted and unfounded fears" about the
health hazards associated with radioactivity. The American
government was convinced that "no world wide health hazards exist
from past or planned future tests."

41 The physics laboratory at the University College of
Science noted on June 6, for example, that there was a
considerable increase (30X) in the radioactive nuclei brought
down by showers of rain. See Telegram from the American Consul
in Calcutta to the State Department, June 8, 1956, DSRG 59,
711.5611/6-856, NA, Washington. In 1956, the British also
carried out nuclear tests at Maralinga, located in South
Australia. See article "Mile Wide Scar in Test of British Atomic
Device," The Times (27 September 1956).

42 U.S.I.A. Report, "Thirteenth Weekly Summary of Foreign
Reaction to U.S. Nuclear Tests," August 3, 1956, DSRG 59,
In addition to the mounting international pressure, public opinion in both Britain and the United States became increasingly anxious about nuclear tests in 1956. AEC Commissioner Thomas Murray renewed his call for a test ban on February 23 and again on April 12. Although Murray did not recommend a ban on all tests, he proposed that the U.S. unilaterally forgo any further explosions of thermonuclear weapons in the megaton range. Inspired by Murray, Democratic candidate Adlai Stevenson thrust the test-ban issue into the presidential election campaign when he proposed a ban on all hydrogen bomb explosions during his speech to the American Society of Newspaper Editors on April 21.43

As a result of this domestic political pressure, the president was drawn into the public debate. After Stevenson made his proposal, Eisenhower decided that the U.S. position had to be buttressed by a statement from a body other than the Atomic Energy Commission. In his view, the AEC's arguments in favour of testing were not sufficient to reassure the public, especially since "people could say that Lewis Strauss was a prejudiced

711.5611/8-356, NA, Washington. In July, reports of high levels of radiation came from other parts of the world as well, such as Chile and and Yugoslavia. See Telegram from the American Consulate in Zagreb to the State Department, July 20, 1956, DSRG 59, 711.5611/7-2056, NA, Washington.

Therefore, he informed the Joint Chiefs of Staff that he needed a strong statement from them arguing that "these experiments were not to make bigger bombs to kill people, but bombs suited to military requirements, smaller and of less danger to humanity." The JCS should also emphasize, according to the president, that the tests were necessary to protect the "security of the United States, under present conditions."  

Eisenhower must have been pleased by the JCS' statement, received the following day, which contended that the current series of tests taking place in the Pacific had three important purposes. First, the experiments increased American understanding about the means of controlling radioactive fallout. Secondly, the tests improved the quality and effectiveness of warheads for air defense. Thirdly, they improved the "security of the U.S. and the free world." A ban on testing, either complete or limited, the JCS concluded, would be dangerous to national security unless preceded by "universal acceptance of a comprehensive disarmament system."  

At a press conference on April 25 a reporter asked Eisenhower to comment on the recent proposals made by Murray and Stevenson. Eisenhower responded by giving some justifications  

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44 Telephone call from the President to Under Secretary of State Hubert Humphrey, April 23, 1956, DDE Diary Series, AWF, DDEL, Abilene. During this call, Eisenhower instructed Humphrey to get a statement from the JSC.  

45 Memo from N.F. Twining, JCS, to the Secretary of Defense, April 23, 1956, Subject Series, Department of Defense Subseries, Folder: JCS(2), WHOSS, DDEL, Abilene. This memo (00254) is also found in the NSA, Washington.
for the continuation of the American program. The United States would go ahead with its tests, he suggested, "not to make a bigger 'bang', not to cause more destruction," but rather to find ways in which to limit these weapons, to make them useful for "defensive purposes, to shoot against a fleet of airplanes that are coming over, to reduce fallout, and to make them more military weapons ... than just ones of mass destruction." In conclusion, the president stated that "goodness knows I don't want to do this. If you would allow me to put this money in -- I mean, if the world would allow us to put this money in schools and all the rest of the things, we all know what would result ... But as long as we have to do it, let's do it right, and the best we know how!"  

Stevenson repeated his call for a complete test ban on at least three more occasions in September and on October 4, Murray sent another letter to the president advocating an immediate halt to explosions involving multi-megaton thermonuclear weapons. In response, Eisenhower argued against


67 Hewlett and Holl, Atoms for Peace and War, 362-365.

68 Letter from Thomas Murray, AEC Commissioner, to the President, October 4, 1956, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL. This letter is also found in FRUS, XX: 434. Eventually, Eisenhower became impatient with all of these messages from Murray. In a later conversation with Strauss and others, the president asked when Murray's term would expire. When he was told that there might be some pressure to reappoint him, Eisenhower asked "from whom" and gave the impression that he would resist such pressure. See Memo of Conversation, February 28, 1957, OCB Series, Subject Subseries, WHOSANSA, DDEL, Abilene.
a moratorium during a press conference on the grounds that the Russians would use it as an opportunity to make secret preparations for resumption, and thus "make tremendous advances while we would be standing still." In an official White House statement, the president also pointed out how vital nuclear weapons were to offset superior Communist manpower, stressed the need to continue testing, and concluded that "This specific matter is manifestly not a subject for detailed public discussion -- for obvious security reasons." 49

A couple of weeks later, when the election campaign was in full swing, Stevenson offered several reasons why the United States should support a ban during a public speech. The United States already possessed bombs large enough to destroy entire cities; there was no need to develop bigger ones. A test ban did not require inspection, since any violation could be easily detected. A prohibition on testing would halt the proliferation of nuclear weapons to other countries. And finally, a test ban would spare the world the hazards of radioactive fallout, especially strontium-90. Pointing out that the Soviet Union had already expressed a willingness to stop testing, he asked, "What are we waiting for?" If he were elected, Stevenson promised, he would immediately call an international conference to work out a test ban agreement. 50

Throughout the fall, Stevenson gained steady support for his


50 Divine, Blowing on the Wind, 95.
position. Thomas Finletter, former Secretary of the Air Force, stated that he did not see how anyone could object to the Democratic candidate's stance on testing and disarmament. Numerous prominent scientists also began to speak out on Stevenson's behalf. Bentley Glass, a Johns Hopkins biology professor and member of the National Academy of Scientists Fallout Committee, warned that carelessness with ionizing radiation could lead to genetic defects from which there "might be no recovery, for nation, or mankind." Across the nation, groups of scientists from various organizations such as Cal Tech, Columbia University, and Brookhaven National Laboratory, signed petitions and letters to the U.S. government calling for a test ban or at least a public debate of the issue. A survey of the presidents of scientific and technical organizations in the United States indicated that 57 percent of the respondents favoured either halting or limiting nuclear testing by all nations.  

The Eisenhower administration also had scientists that it could enlist to support its continuation of testing, however. Citing data produced by the AEC, Shields Warren, former director of the Committee's division of Biology and Medicine, asserted that testing could be continued for thirty years at the current rate without creating a significant genetic hazard or raising background levels of radiation to more than a fraction. On the other hand, to permit the United States to "fall behind the

51 Hewlett and Holl, Atoms for Peace and War, 366, 368, 376. The survey was carried out in November, 1956.
Russians" would be "disastrous."  

As a result of arguments like Warren's, combined with Eisenhower's popularity, the administration was able to sustain public support for its position on testing. On October 14, the New York Herald Tribune published a street-corner poll indicating that the majority of voters sided with the president on this issue. A few days later, the administration's stance was further strengthened when Soviet Premier Nikolai Bulganin interfered in the election campaign by sending a letter to Eisenhower repeating the Soviet proposal that, as a first step toward the solution of nuclear weapons, an accord be reached immediately to prohibit the testing of both atomic and hydrogen weapons. According to this message, the Soviets "fully shared the opinion recently expressed by certain prominent public figures in the United States concerning the necessity of concluding [such] an agreement." Immediately after the U.S. received this letter, the Russians published it for all the world to see. With little worry about the diplomatic consequences, Eisenhower sent an angry response telling Bulganin that were he a diplomat assigned to Washington, he would have been sent packing back to Moscow. This exchange of letters between Bulganin and Eisenhower was very damaging to Stevenson's candidacy and his stand on testing. Both the press and the Republicans attacked

52 Quoted in Hewlett and Holl, Atoms for Peace and War, 369.
53 Hewlett and Holl, Atoms for Peace and War, 367.
54 Letter from Bulganin to the President, October 17, 1956, International Series, Folder: Bulganin, AWF, DDEL, Abilene.
the Russian move as an example of blatant interference in the American presidential election.\textsuperscript{55} Near the end of October, a special opinion poll conducted by George Gallup revealed that when asked whether the United States should call off hydrogen bomb tests, 56 percent disagreed, 24 percent agreed and 20 percent had no opinion. Similarly, a \textit{Newsweek} network of political reporters in fifty states confirmed that a majority of Americans opposed Stevenson's stand on testing.\textsuperscript{56}

Foreign developments also worked to the president's advantage. Public attention was diverted to the Middle East on October 29, when Israel attacked the Sinai, followed by a combined British and French invasion of Egypt near the Suez Canal. On November 4, Soviet soldiers marched into Hungary and brutally suppressed the revolution. Two days later, Eisenhower easily won the election, carrying forty-one states with 58 percent of the popular vote.\textsuperscript{57} As Hewlett and Holl conclude: "If not exactly a referendum on the subject, the election clearly endorsed the atomic energy policies of the Eisenhower administration."\textsuperscript{58} Bolstered by domestic opinion, the president supported the continuation of American nuclear tests, justifying this program on the grounds that it was necessary to protect the United States and the rest of the "Free World." At the same

\textsuperscript{55} Divine, \textit{Blowing on the Wind}, 98-100; Hewlett and Holl, \textit{Atoms for Peace and War}, 371-373.

\textsuperscript{56} Divine, \textit{Blowing on the Wind}, 108.

\textsuperscript{57} Divine, \textit{Blowing on the Wind}, 109.

\textsuperscript{58} Hewlett and Holl, \textit{Atoms for Peace and War}, 374.
time, however, international pressure in favour of a test ban grew as new shifts were occurring in British and Soviet policies.
In addition to widespread opposition in Asia, protest against nuclear explosions grew in Western Europe. According to a report submitted by the United States Information Agency, opposition was particularly strong in France, Italy, the Netherlands, Norway, West Germany and Britain. As a result of this swelling international pressure, combined with domestic opposition, the British government began to develop a new position on testing in 1956. The Soviet Union also continued to favour a test ban. These developments did not result in any change in the American policy, however. Although some historians, such as Divine and Hewlett and Holl, suggest that the U.S. was beginning to shift its position in 1956, the archival evidence does not support this perspective. As before, the Eisenhower administration suffered from internal divisions throughout this year: the State Department favoured some kind of agreement on testing whereas the Atomic Energy Commission and the Defense Department remained opposed. Although the president occasionally called for new ways of thinking about this issue, he ultimately supported the arguments put forward by the defence bureaucracies.

At the beginning of 1956 Washington’s stance on testing remained the same as it had been since 1954: a ban on tests was not in the security interests of the United States or the "Free World" and was unacceptable except as a part of a comprehensive, safeguarded, disarmament agreement. In the view of the State Department, this position needed further study in preparation for the resumption of the meetings of the UN Disarmament Subcommittee, scheduled to meet in London from March 5 until May 4. Recent international developments had made consideration of a new policy more imperative than ever. In November 1955, the Soviet Union had announced for the first time that it was willing to accept an agreement banning tests as a separate step unrelated to other disarmament measures. In December, it had supported the Indian proposal in the UNGA for a moratorium on tests. In addition to these Soviet moves, the issue of weapons tests and their effects had been receiving mounting public and government attention throughout the world. This trend gained impetus in part from fears about the health and genetic effects of nuclear explosions. It was also due to the hopes present in many

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2 Talking Brief (in preparation for the Eden Visit), January 28, 1956, Series III, WHOSAD, DDEL, Abilene. The government’s standard reply to any correspondence regarding testing was that: "In the absence of a disarmament agreement safeguarded by measures that assure compliance with the terms of the agreement, the national defense of the U.S. and its responsibility to the maintenance of international peace and security alike require continued development and testing of nuclear weapons .... Investigations show that properly safeguarded nuclear tests do not constitute a hazard to human health and safety." See Reply to Correspondence Regarding Cessation of Nuclear Weapons Tests, February 24, 1956, Series III, WHOSAD, DDEL, Abilene.
national capitals that an accord on testing would represent a significant and feasible step toward further agreements on arms control and general reduction of international tensions. Even Pope Pius XII had appealed for an agreement during his 1955 Christmas Eve message. As a consequence of these political developments, the State Department believed that the administration's policy on testing was inflexible and out-dated. Indeed, the American position was subject to "telling criticism since the U.S. did not now seem to be able to put forward a disarmament program in any way limiting, reducing or eliminating stocks of nuclear weapons."³

John Foster Dulles was increasingly concerned about the American image in the world as a result of its position on testing and disarmament. In his view, Eisenhower was uniquely qualified to assume international leadership on these issues. Past American initiatives such as "Atoms for Peace" and "Open Skies" were faulty because they would not halt the arms race. The Soviets had gained the propaganda advantage and challenged the reputation of the United States by claiming that they wanted to end the testing of thermonuclear weapons. In contrast, the Americans were widely perceived as stalling on this proposal while at the same time creating new justifications for continuing the nuclear arms race, or even expanding it. In Dulles' view, the main obstacles to agreements on testing and disarmament were

³ Memo from State Department (Wilcox, Bowie, Smith) to Secretary of State, January 9, 1956, Series III, WHOSAD, DDEL, Abilene.
not technical but political. Based on these considerations, the secretary of state recommended an "urgent re-examination" of the U.S. position by the Special Assistant for Disarmament Harold Stassen in coordination with the Department of Defense, the Atomic Energy Commission, the Central Intelligence Agency and the Department of State.

While this review was under way, discussions among representatives from these bureaucracies indicated how difficult it was going to be for the administration to come up with a fresh position on testing or disarmament. During a session of the President's Special Committee on Disarmament in early January, the representative for Defense admitted that his department held "what might be called a rigid position on the matter of tests." Repeating familiar arguments, the DOD and the AEC indicated that they were firmly opposed to a test ban. In a later meeting, JCS Chairman Radford argued that an effective system of arms limitation that would also maintain the security of the United States was impossible because the Soviets were "not people who would live up to their agreements" and because they were building arms at an unprecedented rate that reminded him "in deadly fashion of the activities going on in Germany in the early


5 Letter from State Department to Harold Stassen, January 9, 1956, Series III, WHOSAD, DDEL, Abilene.

6 Minutes from the President's Special Committee on Disarmament Problems, January 9, 1956, Series I, WHOSAD, DDEL, Abilene.
Indeed, the Russian leaders appeared to be "shooting at a target date for action."  

Eisenhower supported the defence bureaucracies' position on disarmament and a test ban. During an NSC meeting on February 7, he advised that Stassen "should have the benefit of the most positive thinking we can give him." Otherwise, the world was "headed for an armaments race that would end in either a clash of forces which would not result in victory for anybody, or at the very least, stupendous expenditures for an indefinite period." But, in his diary the following day, the president indicated agreement with the perspectives of the DOD and AEC, ruling out any accord which did not provide adequate inspection since the Soviets "had so often proved faithless to their word." A few weeks later, Eisenhower approved a JCS proposal which recommended "a general buildup in the total number of large [thermonuclear] weapons through fiscal year 1959." 

New developments in British and Soviet policies added to the pressure on the U.S. government to come up with a fresh policy. In a public statement in early January, Prime Minister Eden 

7 NSC Meeting Minutes, February 7, 1956, NSC Series, Folder: 275th Meeting of the NSC, AWF, DDEL, Abilene.  
8 Impromptu Meeting of the NSC, February 7, 1956, Admin. Series, Folder: NSC, AWF, DDEL, Abilene.  
9 Diary Entry, February 8, 1956, DDE Diary Series, AWF, DDEL, Abilene.  
10 Memo from Colonel A.J. Goodpaster, U.S. Army Defense Liaison Officer, to Arthur Radford, Chairman of the JCS re: "the Principal Views expressed by the President at his meeting with the JCS," February 27, 1956, Subject Series, Department of Defense Subseries, Folder: JCS (2), WHOSS, DDEL, Abilene.
expressed interest in controlling or regulating, as distinct from banning, future tests of hydrogen or atomic weapons. Queried about this British proposal during a news conference, Secretary Dulles replied rather vaguely that although the American government had been discussing this subject with the U.K over a considerable period of time, obstacles remained in the path of any accord. Both countries recognized the technical challenges involved in developing a control system which could distinguish between permissible and impermissible tests -- between "a new and bigger explosion, and what had become almost a conventional weapon." Asked whether these technical obstacles were insurmountable, the secretary of state feigned ignorance, stating that only the scientists, the experts, and the AEC could provide the answer. The "whole thing" was a "mystery to him," he said, and "much too difficult to understand."

During a visit to Washington on January 31, the British Prime Minister asked whether the United States would support a proposal to limit, control or restrict nuclear explosions. Although he was not confident that the Russians would agree to such an offer, Eden pointed out that it would help him politically in the U.K. where anxiety about fallout was mounting. In response to Eden's suggestion, Strauss argued that worries about radiation from tests were unfounded. According to him, all the nuclear explosions to date had only added a very small fraction of the radiation generated by natural sources. Further

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11 Excerpts from Dulles' News Conference, January 24, 1956, Series III, WHOSAD, DDEL, Abilene.
tests were required to produce defensive nuclear weapons.\textsuperscript{12}

In his conversation with Dulles, the British Foreign Secretary, Selwyn Lloyd, indicated that it was important for the U.K. and the U.S. to come up with an agreed position when the UN Disarmament Subcommittee resumed its talks in London in early March. Although the British government had committed itself to the development of the hydrogen bomb, it faced increasing domestic pressure to modify its position on testing.\textsuperscript{13} In addition to this domestic opposition, Lloyd anticipated that the Russians, or possibly the Indians, would probably put forward a proposal in the Disarmament Subcommittee to limit tests. He further acknowledged that the United States and Britain had to take into account the growing anxiety felt "in responsible circles of opinion throughout the world" about the effects of nuclear explosions. As a result of the domestic and international political problems caused by these increasing fears, it might be a good idea to designate a small group to look into the technical questions related to an accord which would limit tests. If the U.K. and U.S. agreed on such a joint study, Lloyd thought, how could they lose, even if the result was a determination that an agreement was not technically feasible? If

\textsuperscript{12} Hewlett and Holl, \textit{Atoms for Peace and War}, 333-4.

\textsuperscript{13} In 1956, when Gallup asked the British public: "Do you think that the party which gets your vote should support or oppose the proposals to ... negotiate an international agreement to stop H-Bomb tests?" 72\% answered "support," 13\% "oppose," and 15\% "don't know." See George Gallup, ed., \textit{The Gallup International Public Opinion Polls: Great Britain, 1937-1975} (New York, 1976), I: 389.
the study lasted only a short time, and ended with a well-buttressed conclusion, would this not put the West in a better posture vis-à-vis public opinion? Perhaps anticipating the opposition of the defence bureaucracies, Dulles disagreed. If the U.S. set up a new group to study the problem, he argued, this might be the first step on a "slippery slope" towards further limitations: if the U.S. agreed to limit tests of five megaton bombs, some other country might propose a limit of one megaton, and eventually the West might find itself in the untenable position of being able to test only the smaller tactical nuclear weapons. Dulles concurred with Lloyd that the U.S.-U.K. posture on this matter was an "unhappy one," particularly in view of the Soviets' recent proposals in favour of a test moratorium. However, as the British government understood, the process of developing a new position in the United States was an "extremely arduous task" given the need to meld the differing views of the State Department, Defense Department and the Atomic Energy Commission. 14

On February 26, the British, in conjunction with the French, transmitted a tentative disarmament plan to the State Department which indicated a shift away from the American position. Among other matters, the plan called for an undefined limitation on nuclear tests at an early stage, and a complete prohibition of

14 Memo of Conversation between Secretary Dulles and Foreign Secretary Lloyd, January 31, 1956, International Series, Folder: Eden Visit, AWF, DDEL, Abilene.
tests at a later stage.\textsuperscript{15} It was later tabled as a working paper at the opening session of the UN Disarmament Subcommittee.\textsuperscript{16}

In addition to the developments in British and French policy, Moscow kept the heat on Washington by repeating its calls for an end to testing and the arms race. On January 23, Nikolai Bulganin wrote to the president protesting American and British initiatives toward a further "militarization" of NATO\textsuperscript{17} and the creation by the United States of an artificial atmosphere of nervousness and fear about an imaginary Soviet "threat".

According to Bulganin, the American leaders should understand that the Soviet Union had no intention of attacking either the U.S. or any other country. Unlike the Western leaders, who seemed bent on an arms race and an intensification of the "Cold War," the Soviet government was seeking an agreement on arms limitation and an atmosphere of "peaceful coexistence". Although some Americans were trying to portray these goals as "Communist propaganda," many Soviet leaders, as well as statesmen and public figures in other countries, who were not communists, such as those in India, Indonesia, Great Britain, and France, were sincerely calling for a relaxation of tensions between East and West. Bulganin presented a number of ways that the U.S. could

\textsuperscript{15} Department of State Memo, March 1, 1956, Series III, WHOSAD, DDEL, Abilene.


\textsuperscript{17} Here, Bulganin was probably referring to the reararmament of Germany and its admission into NATO, which took place in the spring of 1955.
improve its relationship with Moscow, including the reestablishment of conditions for normal trade relations and the negotiation of agreements to end the arms race. As a concrete step toward better relations, he proposed that the U.S., U.K., and the U.S.S.R. enter into a pact not to use or to test nuclear weapons, beginning January 1, 1958.\textsuperscript{18}

On February 14, at the 20th Congress of the Soviet Communist Party, Khrushchev formally rejected the idea that war was inevitable. He and other Soviet leaders emphasized peaceful coexistence with the West.\textsuperscript{19} More specifically, Khrushchev declared that the USSR was ready to agree to certain partial measures in the disarmament sphere, such as the cessation of tests of thermonuclear weapons, pending a more comprehensive agreement. A State Department memo suggested propaganda considerations might have motivated this move: the U.S.S.R. might have calculated that it could safely exploit popular concern about tests since the West was unprepared to accept a ban at this time. Nonetheless, State also believed that it was unwise to rule out the possibility that the Soviets "really were willing to accept a limitation on thermonuclear tests." Given this possibility, as well as the great interest expressed by other UN members in an agreement to limit tests, the United States had to come up with a more flexible position in both a political and a


technical sense. At the very minimum, prior to the March Disarmament Subcommittee meetings, the U.S. had to devise a more effective public presentation and justification of its position to minimize the Soviet propaganda and world reaction against the continued testing of weapons.\(^{20}\) From a foreign policy standpoint, a more favourable, or at least equivocal, American attitude toward some kind of limitation on testing would have more benefits than liabilities. On the negative side, a new position might look like an American admission of guilt that the radiation effects from the tests were dangerous to human health and safety, despite previous official statements to the contrary. A treaty to limit testing might also be difficult to work out because of the technical problems involved in developing an adequate monitoring system. If an accord was signed, other countries might demand not only a permanent end to testing, but also other, more comprehensive, arms control agreements. On the positive side, a new policy would help maintain Western solidarity, since Britain and France had encountered serious domestic opposition to their positions on testing. A more pliable policy would also find a welcome reception in Asia, especially in Japan; might freeze American technological superiority; and, finally, would counteract recent Soviet moves which made it appear as if the United States was uninterested in a limitation on testing or any other form of arms control. Since

\(^{20}\) Memo from the State Department, February 15, 1956, Series III, WHOSAD, DDEL, Abilene. Gerard Smith, the Special Assistant to the Secretary of State for Atomic Energy Affairs, did not sign this memo because he did not agree with all of its details.
the AEC was already studying the technical requirements of an agreement, the State Department, reiterating Dulles' earlier suggestion, recommended a parallel study of the political implications of an accord. State also advised Stassen to coordinate the two studies with the aim of coming up with a more flexible position. From the department's perspective, the central question was: "What can the U.S. Government say in March at the UN to explain more meaningfully, in terms of world opinion, the reasons why it does not accept a moratorium now?" 21

In early March, as the date for the resumption of the UN Disarmament Subcommittee talks neared, it became clear that the administration's position would remain unchanged. Ignoring the State Department's advice, the NSC instead supported the recommendations made by the defence bureaucracies. In order to calm public anxieties, the AEC recommended that Washington should continue to deny allegations as to the harmful health and genetic effects of test explosions. According to a report submitted by the agency, the amount of risk involved in the testing of nuclear weapons was about the same as the "risk in manufacturing conventional explosives or in transporting inflammable substances such as oil or gasoline on our highways." This small degree of danger had to be balanced against the "great importance of the test programs to the security of the nation and of the free world." To date, none of the data collected from the tests had shown that radioactivity was "being concentrated anywhere in the

21 Ibid.
world outside the testing areas (emphasis added)."\22

On March 7, the NSC approved a position paper which made several recommendations, none of which were novel. First, it restated the traditional American policy -- that any proposal to limit testing should not be considered separate from a comprehensive disarmament accord. Even if the U.S.S.R. repeated its proposal for the cessation of tests as a separate measure, the United States should not agree to deal with the question as an isolated step. It should reject any compromise which would allow the Soviets to believe that the "Open Skies" plan could be avoided. Secondly, the American government should seek a common Western position by dissuading France and the U.K. from pressing for a test ban. It should also emphasize the necessity for "open, democratic countries to perfect the deterrent against a surprise attack." Indeed, the "perfection of the means of deterrence ... was compulsory for Western democracy." Since proposals for a test ban were popular in many areas of the world, including some quarters within the U.S. itself, public statements should stress the "defensive nature" of American nuclear weapons.\23 After this paper was approved by the NSC, the President's Special Committee on Disarmament met to discuss its recommendations. Stassen summed up the American position nicely

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\22 "Position Paper on the Suspension of Experimental Explosions of Nuclear Weapons," Special Disarmament Staff Study for the President (NSC Action 1328), March 7, 1956, Series III, WHOSAD, DDEL, Abilene.

\23 Ibid. These recommendations were repeated in a Telegram from the State Department to the American Embassy in the U.K., March 16, 1956, FRUS, 1955-57, XX: 360-1.
when he pointed out that the U.S. would never come right out and state "We will never stop testing," but it would say "We will never agree to stop testing unless and until ----."24

With the London talks underway, the president expressed the government's position on testing in a Budget Message to Congress on March 12. Pending a "trustworthy" agreement, he stated, the United States "must continue to increase [its] nuclear weapons stockpile which, together with the means of delivery, is the principal deterrent to armed aggression in the world." At the same time that it was pursuing this buildup, the U.S. would also make an effort to develop peaceful uses of atomic energy and methods of defense against atomic attack. Public health and safety were, of course, the primary considerations in the conduct of tests, and "extensive precautions" were taken to safeguard against hazards.25

Although Eisenhower's message contained many of the recommendations made by the NSC, not all members of the administration found it to be satisfactory. In the view of the State Department, the position outlined in the paper would have to be "re-explored fairly often in light of the political pressures from the allies [particularly Britain and France] and in light of what the Russians might or might not come up with."

24 Minutes from the Meeting of the President's Special Committee on Disarmament Problems, March 7, 1956, Series I, WHOSAD, DDEL, Abilene.

25 Letter from Morse Salisbury, Director of Information Services, AEC, to Mr. Riley, March 12, 1956, Series III, WHOSAD, DDEL, Abilene.
Because its policy on testing was "highly unpopular in many parts of the world," the U.S. was going to have to present more convincing "justifications" to explain its resistance to any restrictions on tests. To help with the negotiations in the Disarmament Subcommittee, the department asked the AEC to make available to the American delegation some technical and scientific facts to reinforce the American stance. It was unclear to many why the U.S. believed that it was impossible to accurately monitor explosions in other parts of the world. In addition, the government's assurances to the public regarding the health and genetic effects of testing were "not at all convincing."

In response to the State Department's skepticism, the AEC held that considerable information on nuclear testing was already in the public domain and that no convincing evidence existed that testing was hazardous to human health. Even if the weapons tests continued "for an indefinite period," an AEC representative claimed, "the ultimate dose per individual ... would be less than involved in a chest X-ray or a tooth X-ray."

Similarly, a Technical Staff Paper sent by the agency to the U.S. Delegation at the London talks dismissed any fears about radioactive

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26 Minutes from Two Meetings of the President's Special Committee on Disarmament Problems, March 14, and March 27, 1956, both found in Series I, WHOSAD, DDEL; See also Letter from Wainhouse, State Department, to Smith, March 26, 1956, Series III, WHOSAD, DDEL, Abilene.

27 Ibid.
contamination from the American tests.  

During the meetings of the UN Disarmament Subcommittee in London the Soviet Union made some significant proposals. The Russian delegates introduced a draft agreement on the reduction of conventional armaments and armed forces (to a ceiling of 1,500,000). They also proposed a discontinuation of tests of all thermonuclear weapons. In addition, they came forward with a detailed program for ground inspection. They even agreed that ground inspection should be in place before any of the powers began to reduce the level of their forces.

In contrast, the American position on testing and disarmament remained unchanged. In London, Stassen offered a working plan which did not include anything significant or novel. He did not introduce any new recommendation regarding nuclear tests. Instead, he proposed a modified version of the "Open Skies" offer; a reduction in American conventional forces (from 2,900,000 to 2,500,000); and the establishment of technical exchange groups to study the control and inspection problems associated with disarmament.


In the end, these talks stalemated with little accomplished. During an impromptu discussion with Stassen near the conclusion of the talks, Khrushchev expressed his favourable regard for Eisenhower but his doubt about the American intentions regarding disarmament. According to the Russian leader, whenever the Soviets had attempted to move closer toward adopting Western proposals in the past years, they had discovered that the West kept moving away. Khrushchev was also troubled by the Americans' obsession with aerial inspection.

In May, the Kremlin made a statement highly critical of the Western position on disarmament. As a result of Western recalcitrance, discussions at the UN Subcommittee on Disarmament had turned out to be "futile". From the Soviet perspective, these talks had merely become a "screen to cover up the armaments race." The Western delegates had talked much about aerial photography but this had "no connection whatsoever with the reduction of armaments." There had also been much discussion in the Subcommittee to the effect that stopping the armaments race was inopportune at this time because a number of political problems, such as Germany, had to be settled first. However, from the Soviets' viewpoint, the chief obstacle in the way of easing international tensions was the armaments race. This race was also having a negative effect on the Soviet economy. The

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31 Telegram from the American Embassy in London to the Secretary of State, April 25, 1956, Admin. Series, Folder: Stassen, Harold E., AFW, DDEL Abilene.

32 Hewlett and Holl, Atoms for Peace and War, 336.
peoples of the U.S.S.R. wanted to put the maximum amount of energy into peaceful work, such as new factories, plants, electric power stations, mining installations, dwellings, hospitals, schools and universities. They were convinced that a cessation of the armaments race and a broadening of international economic ties would improve their welfare and further establish friendly cooperation among all nations. 33

In late May, Dr. Isidor Rabi, Chairman of the General Advisory Committee for the AEC, learned more about the British and French positions on testing when he visited Europe. In France, the head of the Commissariat for Atomic Energy, Francis Perrin, explained to him that the French had decided to go ahead with the development of their own nuclear weapon. 34 At this time, the French had many reasons for wanting their own bomb. As McGeorge Bundy points out, they had suffered repeated humiliations in the process of losing their former colonies. And, as the Germans moved toward rearmament, with American support and encouragement, the French believed that they needed to reestablish a clear military distinction between themselves

33 Statement of the Government of the U.S.S.R. on the Problem of Disarmament, May 14, 1956, International Series, Folder: U.S.S.R., AWF, DDEL, Abilene. In this statement, the Soviets proposed to carry out (by May 1957) further reductions in the size of the armed forces. They also proposed to demobilize combat units stationed within the territory of the German Democratic Republic (numbering 30,000 men). Later, at the concluding session of the Supreme Soviet, similar arguments were put forward, including a proposal to stop experimental nuclear explosions. See Telegram from Embassy in Moscow to the Secretary of State, July 16, 1956, Series III, WHOSAD, DDEL, Abilene.

and their former enemies. France also wanted to match Britain’s nuclear program. But, perhaps above all, according to Bundy, "the domination of the Western alliance by the United States, and a sense that American nuclear preponderance was decisive in that domination, reinforced French determination to have a bomb."\(^{35}\)

For his part, Perrin was not enthusiastic about this decision. In his view, the French might give up the project if a world wide test moratorium was proposed as late as 1957. But if such a moratorium was not proposed until 1958, they would go ahead with their first tests which were planned for 1959.\(^{36}\)

In conversations with John Cockcroft, the director of the U.K. Atomic Energy Establishment at Harwell, Rabi was given to understand that the British were "quite loath" to go through with the thermonuclear tests planned for Christmas Island in 1957. In addition to domestic political opposition, there were several other reasons for this reluctance: the huge cost of the operation; the expectation that no significant weapons developments would result; and the waste (in terms of finances and talent) caused by the duplication of experiments already done by the Americans. If the British could get a promise from the

\(^{35}\) Later in 1956, the Suez Crisis provided further impetus for the French nuclear project. Although the crisis was neither caused nor resolved by nuclear weapons, that is the way that it was perceived in Paris. In the aftermath of Suez, a large number of French political leaders, including Prime Minister Guy Mollet, drew the conclusion that if France were to stand up for herself in similar situations in the future, it must have the bomb. See McGeorge Bundy, Danger and Survival: Choices about the Bomb in the First Fifty Years (New York, 1988), 474-475.

\(^{36}\) Report of Dr. Rabi’s Visit to Europe, July 10, 1956, Series III, WHOSAD, DDEL, Abilene.
U.S. that it would make the larger scale nuclear weapons available in case of war, then they might be willing to call off their next set of tests.\textsuperscript{37}

In early June, the British conveyed to the Americans their intention to make a statement regarding the Christmas Island tests. This statement had been delayed to permit the British government to study a report made by the British Medical Research Council (MRC) on the hazards of fallout. Although this report was cautious in its predictions, it did acknowledge that harmful effects might result if nuclear testing continued at its present rate: "Recognizing the inadequacy of our knowledge [in this area], we cannot ignore the possibility that ... we could, within the lifetime of some now living, be approaching levels at which ill-effects might be produced in a small number of the population."\textsuperscript{38} Because the British government anticipated that this report would increase sentiment for the cessation of all tests, it had decided to announce its willingness to open discussions with the other nuclear powers about the possibility of limiting and controlling future explosions. The British believed that only through such a proposal could the international pressures for a complete ban on testing be forestalled.\textsuperscript{39}

\textsuperscript{37} Ibid.

\textsuperscript{38} Memo from Gerard C. Smith, Special Assistant to the Secretary of State, for Atomic Energy Affairs, to the Secretary of State, June 5, 1956, Series III, WHOSAD, DDEL, Abilene. The report was summarized in the \textit{New York Times} (13 June 1956): 22.

\textsuperscript{39} Memo from Smith, June 5, 1956.
Lewis Strauss was very displeased when he heard about the British intention to make an announcement. He was worried about the negative effect that such a statement would have on the U.S. posture, especially since it would come in the middle of the "Redwing" series in the Pacific. The State Department agreed. During a conversation with Sir Roger Makins, Dulles advised the British ambassador that the U.S. was very concerned about the U.K.'s intention to make an announcement. The secretary of state said it was his understanding that the present rate of testing could be continued indefinitely without any danger to humanity from radiation effects. Chairman Strauss reinforced Dulles' argument during this conversation. According to him, the AEC had found that the maximum permissible level of Strontium-90 was higher than that cited by the MRC. He read from an AEC report which emphasized the harmlessness of the current program. According to this report: "testing could be continued at the present rate, and indefinitely at the present rate, without increasing the exposure of human beings throughout the world to radiation from Strontium-90, above the level cited in the report of the British MRC, a level which is extremely conservative." The conclusions of a report by the National Academy of Scientists, published on June 12, were not nearly as optimistic as the AEC report. Indeed, the commission was not happy with some of the conclusions of this study, particularly those

40 Ibid.

41 Memo of Conversation, Department of State, June 6, 1956, FRUS, 1955-57, XX: 400-402.
concerned with the health and environmental effects of testing. The report had concluded that there was "no safe dose of radiation in genetic terms" and that "any exposure of the sex organs was genetically undesirable." It also found that exposure to radiation at low levels from time to time over a period of years could "result in a variety of injurious effects ... such as leukemia and skin cancer." In addition, radioactivity in the waters of the test areas was "very greatly increased at the time of the tests, and even after diffusion over thousands of miles concentrations remained that were readily detectable." Finally, in terms of food production and agriculture, scientists were concerned about contamination by Strontium-90 and the "slowly rising levels of background radiation." In Strauss' view, these conclusions posed a difficult public relations problem for the American government since they "provided fertile materials for propagandists who were agitating against the continuation of weapons tests."

Nevertheless, the AEC was not completely displeased with the findings of the report since it also included one statement which suggested that the "fall-out dose to date ... was a small one as compared with the background radiation, or as compared with the average exposure to medical X-rays." In a letter to the president, Strauss chose to discuss this reassuring conclusion and not the others regarding the harmful effects of testing. This emphasis is not surprising, given the fact that this was the

42 AEC Staff Report on NAS Radiation Study, June 12, 1956, OCB Central Files Series, WHO, NSC Staff: Papers, DDEL, Abilene.
only aspect of the study which supported the earlier public statements made by the AEC (e.g., in February of 1955). Strauss did not explain to Eisenhower that, from a scientific point of view, this particular aspect of the report was problematic since it referred to average fallout doses, not the specific doses received by the people most directly affected by the tests such as those living near the proving grounds in the Pacific and Nevada.

While Strauss tried to maintain the status quo, Harold Stassen increased pressure on the administration to change its position. In a letter to the president in late June, he recommended a revision of American policy regarding testing and disarmament based on a new argument regarding the possible future proliferation of nuclear weapons. In his view, under current trends, it was possible that in the near future fifteen or twenty nations might have nuclear bombs. Consequently, he believed that it was necessary to come up with a new position. "A sound policy now, leading to either an agreement or no agreement," he argued, was preferable to the alternative of "leaving a vacuum of undecided policy with adverse effects at home and abroad." To forestall uncontrolled nuclear proliferation, Stassen suggested a complex disarmament plan aimed at reducing the number of nuclear

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45 Memo from Stassen to the President, July 20, 1956, FRUS, 1955-57, XX: 410-1.
weapons while at the same time promoting the peaceful uses of atomic energy." Going much further than he had the previous year, he also called for the "U.S. to express its willingness to agree with other nations not to test nuclear or thermonuclear weapons after July 1, 1957, and to permit an effective inspection system to verify the fulfillment of the commitment."  

The Atomic Energy Commission dismissed Stassen's concerns, rejecting his estimate regarding proliferation as "mere speculation." With the exception of Murray, the agency indicated that it was firmly opposed to any limitations on testing, apart from a general disarmament agreement. The Commission objected to any proposal that limited testing and reduced the nuclear weapons stockpile without providing "ironclad" procedures for inspection and verification.  

Stassen ran into further troubles when he decided to support Christian Herter for the vice-presidential nomination at the forthcoming Republican national convention. According to Stassen, a private poll showed that having Nixon on the ticket jeopardized the party's chances of recapturing control of Congress. As Hewlett and Holl point out, Stassen's decision to campaign in favour of Herter "hurt [his] standing within the

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47 Summary of NSC Conference, September 11, 1956, Special Assistant Series, Subject Subseries, WHOSANSA, DDEL, Abilene.

48 Letter from Lewis Strauss to Stassen, July 26, 1956, Subject Series, Department of Defense Subseries, Folder: Defense - Classified, WHOSS, DDEL, Abilene.

Although many members of the administration, like Secretary Dulles, were critical of Stassen's decision to involve himself in Republican politics, several international developments in July convinced the State Department that Stassen was right -- the U.S. desperately needed a new position on nuclear testing. On July 12, India introduced another proposal for a complete test ban at the UN. On same day, the U.S.S.R. made a public statement calling for an immediate halt to all nuclear testing. On July 23, Prime Minister Eden told the House of Commons that the government was now ready to discuss "limitation and control" of nuclear testing independently of other disarmament measures. In addition, the Canadians and the French urged that the UN should promptly take up the question of a test ban. As a result of these international political developments, the State Department recognized that the U.S. was becoming "virtually isolated in its opposition to any limitation on nuclear weapons tests except in

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50 Hewlett and Holl, *Atoms for Peace and War*, 348-349.

51 Bulganin raised the subject again in a letter to Eisenhower on September 11, which read in part: "It is a known fact that the discontinuation of such tests does not in itself require any international control agreements, for the present state of science and engineering makes it possible to detect any explosion of an atomic or hydrogen bomb, wherever it may be set off. In our opinion, this situation makes it possible to separate the problem of ending tests of atomic and hydrogen weapons from the general problem of disarmament and to solve it independently even now, without tying an agreement on this subject to agreements on other disarmament problems." See *FRUS, 1955-57*, XX: 420.
connection with broader disarmament agreements." In view of this situation, the department suggested that it would be of "utmost political advantage" if the U.S. announced that it would unilaterally cease the testing of all large thermonuclear weapons (with a yield of 100 kilotons or more) for a period of at least one year.\footnote{52}{Memo from Robert D. Murphy, Deputy Under Secretary of State for Political Affairs, to the Secretary of State, Approved by Dulles, August 8, 1956, DSRG 59, 711.5611/8-856, NA, Washington. See also USIA Draft, August 3, 1956, OCB Central Files Series, WHO, NSC Staff: Papers, DDEL, Abilene.}

Although the Atomic Energy Commission was aware of the growing international and domestic pressures against the American program, it continued to reject the idea of a test cessation. Instead, the agency decided that propaganda should be used to deflect attention away from the harmful aspects of testing. When the AEC (in conjunction with the Department of Defense) announced that Operation "Redwing" was over in late July, Strauss justified these tests on the ground that they had contributed to the security of the United States and the "Free World".

As part of its public relations effort, the AEC also proposed placing more emphasis on the Soviet tests. The NSC adopted a resolution along these lines. The American government should make every effort, the NSC advised, while "actively avoiding any increased public demand for a ban on all future nuclear tests, to get some of the popular odium and opprobrium detached from the U.S. weapons testing program and attached

\footnote{53}{Letter from Murphy to Stassen, August 31, 1956, FRUS. 1955-57, XX: 419-421.}
clearly and definitely to the Soviet effort." For example, the AEC might make an announcement giving "as full and colourful an account of the [recent] Soviet test shot as possible."\(^{54}\)

In order to carry out this rather difficult public relations strategy, the AEC turned to the American expert in sales and advertising, the President of Coca Cola, William E. Robinson, for his advice. Robinson stated that although he was not well-informed about Soviet tests, he was fully aware of the mounting tide of foreign public opinion for a ban on all nuclear explosions. Therefore, he tentatively recommended that the AEC make several public statements intended to give information about the Soviet tests and at the same time to build support for the U.S. program. He warned that there might be two disadvantages to this approach, however. If the U.S. drew attention to the Soviet tests, there might be an increase in public demands in other countries for a ban on all nuclear testing. There might also be greater realization, by the general public, at home and abroad, that there were effective methods of detection currently in use even without the implementation of an international monitoring or inspection system.\(^{55}\)

\(^{54}\) NSC Report, July 27, 1956, OCB Central Files Series, WHO, NSC Staff: Papers, DDEL, Abilene. Later, the NSC members decided that the statement about "popular odium and opprobrium" and any reference to blame assumed by the U.S. should be removed from the report. See Memo from Roy Melbourne to Dr. Edward P. Lilly, "Suggested Editorial Changes in the Special Report on Announcements re Future Soviet Nuclear Tests," August 6, 1956, WHOSAD, DDEL, Abilene.

\(^{55}\) Memo from AEC to OCB re: telephone conversation with William E. Robinson and His Views on Announcements of Future Soviet Nuclear Tests, July 25, 1956, OCB Central Files Series,
As a result of the advice from the President of Coca Cola, the NSC decided that any announcement would have to be developed carefully so that it "aroused public antipathy to Soviet testing without automatically contributing to the increasing public demands" for a test ban. Such an announcement should also avoid giving the impression that all nuclear tests could be detected.\footnote{NSC Memo, July 27, 1956, OCB Central Files Series, WHO,NSC Staff: Papers, DDEL, Abilene.}

In August, Eisenhower released a statement drawn up by Lewis Strauss which compared American and Soviet testing policies. According to the statement, the "secrecy of the Soviet weapons test program ... contrasted sharply with the responsible information policy" of the U.S. program. All American test programs had been "announced well in advance and public information about them had been made available to the fullest extent consistent with security."\footnote{Memo, August 17, 1956, OCB Central Files Series, WHO,NSC Staff: Papers, DDEL, Abilene.} Because of the favourable overseas reaction to Strauss' statement on Soviet tests,\footnote{OCB Minutes, September 10, 1956, and USIA Report, "Overseas Reaction to White House Statements on Soviet Nuclear Tests," both dated September 21, 1956, and found in OCB Central Files Series, WHO,NSC Staff: Papers, DDEL, Abilene. According to the USIA report, Strauss' statement had succeeded in drawing greater international attention to the Soviet tests: world opinion was now focussing on "two guilty parties, not just one." Only one editorial comment, from Bonn, drew the conclusion that since current "detection methods made it possible for nuclear tests to be supervised by powers other than those immediately involved ... nothing more than goodwill was required to arrive at an agreement on their discontinuance."} the USIA recommended that the government "keep this story going and..."
put the Russians further on the defensive." 59

However, in September, the NSC and the OCB decided that this propaganda campaign might not have the desired effects. There was a danger of incurring a "propaganda boomerang" if the U.S. went too far in stressing the safe and non-secret nature of its own tests. Despite Strauss' claim, the United States did not announce all of its tests. In fact, very few of the shots fired in the Eniwetok series had been announced. The NSC also worried about the effect that such attention would have on domestic public opinion in the ensuing months. On September 10, when the U.S. District Court, Salt Lake City, Utah, was to hear the first suit (of six) brought against the government by stock men claiming damage to their land and sheep caused by fallout from nuclear tests at the Nevada proving ground in 1953, there would almost certainly be unfavourable publicity with respect to the safety of nuclear testing. Another damage suit had already been brought by Nevada miners who claimed that they suffered from nervous debility and a sudden and dramatic loss of hair following a "dusting" during the same series of tests. Despite the efforts at safety during American tests, the NSC conceded that there was no doubt that "there had been in the past, and there could be expected in the future, isolated instances where accidents had occurred, including some from radiation." In October, a book was to be published which included medical details and colour

photographs of the Marshall Islanders who were affected by the fallout from the Pacific Proving Ground tests in 1954. In the light of all of these factors, the OCB and the NSC decided that it would be unwise, at this time, to stimulate discussion regarding either the safety or openness of the American testing policies since discussion would undoubtedly result in "a general revulsion against any tests ... all over the world."\(^{60}\)

On September 11, Harold Stassen asked the National Security Council for permission to conduct exploratory talks with the British regarding disarmament and a test ban. Although Secretary Dulles supported this idea, the AEC and the DOD were not receptive to it. According to Admiral Radford, the size of the American stockpile of nuclear weapons had a "vital bearing on the probability of [the U.S.] winning a global war." The United States was short on defensive weapons and would have to "revise all of its war plans" if it stopped stockpiling in the next two years. Furthermore, he was skeptical about whether the U.S. could ever come up with a reliable inspection system. Agreeing with the arguments made by Radford, Lewis Strauss contended that it was doubtful "whether the United States could ever stop testing nuclear weapons."\(^{61}\) Supporting Stassen's position,


\(^{61}\) Summary of White House Meeting, September 11, 1956, Special Assistant Series, Subject Subseries, WHOSANSA, DDEL, Abilene. A similar account of this meeting is found in FRUS, 1955-57, XX: 423-27.
Secretary Dulles emphasized that the purpose of the meeting was to try and find some basis for exploratory talks with the allies, followed by negotiations with the Russians. The president also disapproved of the pessimistic arguments put forward by the defence bureaucracies. He worried about the cost of the arms race as well as the possibility that nuclear weapons would proliferate into the hands of other nations. Although he challenged the other members of the NSC to come up with "some alternative way of thinking," he concluded by reiterating the traditional position that any agreement to limit or cease testing would have to be "conditioned upon the prior installation of an effective, reciprocal inspection and detection system."

On the same day that the NSC held this meeting, the Soviet Union put more pressure on the administration to shift its policy. In a letter to Eisenhower, Premier Bulganin argued against linking a test ban with general disarmament. In language similar to that used by Stassen, the Russian representative described a halt to testing as the "first important step" toward more significant disarmament measures.

As a result of all of the domestic and international pressure in favour of a test ban, the president felt the need to justify the American program during a press statement on October 24. Although his administration wanted to "put all nuclear weapons permanently aside ... [and] stop all tests of such

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62 Ibid. See also Hewlett and Holl, Atoms for Peace and War, 363.

63 Hewlett and Holl, Atoms for Peace and War, 364.
weapons," the U.S. could not do this until it was sure that "all peoples were safe from [nuclear] attack." In order to dissuade any nation from the temptation of aggression, the United States had to make sure that its military weapons were of such quality and quantity as to "command respect." Eisenhower then proceeded to list all of the American attempts at disarmament, highlighting "Atoms for Peace," "Open Skies" and the appointment of the Special Assistant for Disarmament, Harold Stassen. Given his administration's attempts to reach an agreement, the president argued, there was only one reason none had been achieved: the Soviet Union refused to accept any dependable system of mutual safeguards. In the light of these "facts", the American government had continued to test and develop the most advanced weapons and to enlarge its stockpile of nuclear weapons. The power of the nuclear deterrent would be lost if the U.S. failed to hold its superiority in these weapons, particularly in view of its numerical inferiority to communist manpower. Furthermore, the "most sober and scientific judgement" had decided that a continuation of the current rate of H-Bomb testing would "not imperil the health of humanity." Indeed, the National Academy of Scientists had reported in June that the "radiation exposure from all weapons tests to date -- and from continuing tests -- was, and would be, only a small fraction of the exposure that individuals receive from natural sources and from medical X-rays during their lives." The continuation of testing enabled the U.S. to make weapons with "drastically reduced fall-out" which could be used for the defense of the American people against "any
possible enemy attack." With regard to the Soviet proposals, it was "indisputable" that they truly had "sympathy with the idea of stopping H-Bomb tests." However, none of their proposals had included any formula for safeguards, control or inspection. The American government had thus concluded that the U.S. had to continue to develop its strength in the most advanced weapons -- "for the sake of our national safety, for the sake of all free nations, and for the sake of peace itself." 64

On November 17, the Soviet government declared that it had unilaterally reduced its armed forces by 1,840,000 men, cut its military budget by 10 billion rubles and liquidated its military bases at Port Arthur and Porkkalaudd. According to the principles set forth by the Twentieth Congress, the Soviet Union did not view war as a means of resolving international tensions and it did not rule out the possibility of co-existence with the capitalist powers. The Soviet people were very interested in raising their living standards. In this sense, the government was convinced that the interests of all peoples -- East and West -- coincided. These peoples "did not need atom bombs or tanks or cannons, they needed clothing, food, housing, schools for children, and a quiet and secure future ..." Specifically, the U.S.S.R. proposed further reductions in conventional forces and bases and a halt to all nuclear testing. It also added a new

64 Press Statement by the President, October 24, 1956, Admin. Series, Folder: AEC, AWF, DDEL, Abilene. In this statement, Eisenhower incorporated many of the ideas contained in a memo sent to him on October 21 from Lewis Strauss which is found in the same folder.
element -- a willingness to allow some aerial photography in some Warsaw Pact countries if some Western European countries agreed to do the same.\textsuperscript{65}

Because of Soviet Union's involvement in the Suez Crisis and its brutal suppression of the Hungarian revolution, the United States viewed this public statement with suspicion. In his very abbreviated response to the Russian proposals, Eisenhower emphasized his indignation at the use of Soviet forces in Hungary. The only disarmament proposal that he made any reference to in his letter to Khrushchev was the Soviet willingness to consider aerial inspection. However, he found even this element to be unsatisfactory since the central tenet of his Geneva proposal (of 1955) had been aerial inspection over the "centre of [Soviet] military power," not just over the satellite countries.\textsuperscript{66}

At this time, the only proposal that the administration considered supporting was a very limited one put forward by Norway and supported by Canada.\textsuperscript{67} According to this

\textsuperscript{65} Telegram from the American Embassy in Moscow to the Secretary of State re: the Declaration made by the Soviet Government, November 17, 1956, International Series, Folder: Bulganin, AWF, DDEL, Abilene.

\textsuperscript{66} Letter from Eisenhower to Khrushchev, December 31, 1956, International Series, Folder: Bulganin, AWF, DDEL, Abilene.

\textsuperscript{67} According to the American Embassy in Oslo, this proposal was largely motivated by domestic pressure on the the Norwegian Government to "do something" about the problems caused by nuclear testing. See Telegram from Oslo to the Secretary of State, December 22, 1956, Series III, WHOSAD, DDEL, Abilene. See also Excerpt from Statement by Secretary of State Pinard, Canadian Representative at the UNGA, December 5, 1956, Series III, WHOSAD, DDEL, Abilene. Pinard was willing to support the Norwegian
recommendation, introduced at the UNGA on November 27, all of the nuclear powers would register any planned weapons tests (likely to cause measurable fallout) well in advance of the beginning of a new series. This advance registration would give the UN the "possibility of alerting member states in case competent scientific authorities deemed the planned tests to exceed the limits of absolute safety." Even though this was a very moderate proposal which did not call for any limitations on testing, the American government approached it with caution. After the British were consulted, the Canadians had to be told that although the U.S. was favourable to the Norwegian suggestion, the government hoped that discussion in the UNGA "would not go beyond the consideration of the registration of tests." The State Department and the USIA were not entirely satisfied with this position, however. On December 17, they argued that, from a political point of view, the United States should try to come up with some policy which would go beyond the Norwegian proposal. Harold Stassen agreed with this suggestion but pointed out that, "as of yet, the U.S. has no policy which

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69 Summary Minutes from a Meeting of the President's Special Committee on Disarmament Problems, December 4, 1956, Series I, WHOSAD, DDEL, Abilene.
would permit us to do that." In the end, the administration decided to accept the Norwegian proposal, primarily because it was seen as a way to forestall more radical recommendations that might originate elsewhere. In other parts of the world, such as India and the Soviet Union, the proposal was the object of much criticism. In India, the government had indicated its plan to push vigorously for a nuclear test ban during the next meeting of the Disarmament Subcommittee. It did not consider the Norwegian suggestion to have any value since it would not provide a solution to the real problems posed by the continuation of testing. Similarly, the Soviet government reported its desire to move directly to a "complete discontinuation" of nuclear tests. From the perspective of the U.S.S.R., the Western support for the Norwegian proposal was really just a "way to legitimize the continuation of testing." Admiral

According to some historians, Eisenhower was beginning to shift the American policy on testing and disarmament in the fall of 1956. Lacking access to the records of the NSC meetings, Divine speculated that the administration, led by the president, was beginning to reverse its stand on testing when Stevenson "snuffed out" this "promising attempt" by introducing the issue

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70 Minutes from the Meeting of the President's Special Committee on Disarmament Problems, December 17, 1956, Series I, WHOSAD, DDEL, Abilene.

71 Telegram from Henry Cabot Lodge at the UN in N.Y. to the Secretary of State, December 19, 1956, Series III, WHOSAD, DDEL, Abilene.
into the election campaign. In a similar vein, Hewlett and Holl suggest that "only the most astute observers" would have detected in the president's public speeches a "major shift in administration disarmament policy." In their view, few were aware at the time that the U.S. was in fact "preparing a major diplomatic initiative to limit testing." Despite his great impatience with the "public posturing of Stevenson and Bulganin," Eisenhower's "determination to seek an end to the nuclear arms race" and his "commitment to a nuclear test ban remained unchanged." Unfortunately, however, it is very difficult to substantiate this perspective with concrete evidence from the official records. In 1956, there was growing international and domestic support for an end to testing. Some members of the administration, such as Stassen and Dulles, did favour a proposal for test ban, or at least exploratory talks which might lead to such an agreement. However, they met persistent opposition within the administration from the Atomic Energy Commission and the Defence Department. Although the president occasionally indicated his frustration with the disarmament impasse, he did nothing which would encourage a shift in American policy. Instead, he continued to support the traditional U.S. position linking any agreement on testing with general disarmament and an effective control system.

Despite all of the international and domestic pressures

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72 Divine, Blowing on the Wind, 86, 111.
73 Hewlett and Holl, Atoms for Peace and War, 365-6, 375-6.
against testing in 1956, the AEC began to prepare in late December for its next series of tests. In all, the AEC planned to carry out at least 25 nuclear tests, starting May 1, 1957, at the proving grounds in Nevada. Although Eisenhower expressed some doubt about the advisability of these tests, he approved the AEC's plans.74

74 Memo of Conversation at the White House, December 26, 1956, Dulles-Herter Series, AWF, DDEL, Abilene.
Chapter 8

THE ADMINISTRATION EMBRACES "CLEAN" NUCLEAR WEAPONS AND REJECTS STASSEN

In 1957, international pressure continued to grow for an agreement to end the testing of nuclear weapons. Although the British government withdrew its proposals for a limitation on testing, other countries, such as Japan, India, Germany and France, favoured an accord. Even more importantly, the Soviet Union continued to make important concessions to the West during negotiations in order to reach an agreement on testing independent of a more comprehensive disarmament treaty. According to some historians, such as Robert Divine, Richard Hewlett and Jack Holl, the United States also indicated a serious willingness to negotiate a test ban in 1957.¹ A closer examination of American policy during this year reveals, however, that there was very little change in the administration's approach to testing. As before, the defense bureaucracies rejected any political agreement which might adversely affect their testing programs. The president and the State Department realized that this stance was becoming increasingly untenable in the international realm, but they were swayed by the arguments made by the AEC, the JCS and the DOD in favour of more testing.

As a result of the resistance within the administration to any significant change in the American policy, it was extremely difficult for the President’s Special Assistant for Disarmament, Harold Stassen, to make progress during negotiations within the UN Disarmament Subcommittee in London. Throughout the course of these discussions, Stassen made a genuine attempt to reach an accord with the Soviets on testing, but his efforts were consistently undermined by his own government, as it remained a prisoner of its defense bureaucracies. Following the advice of the AEC and DOD, the president in the summer of 1957 approved plans for more testing, justifying the U.S. program by claims about the Soviet "threat" and the possibility of producing "clean" and defensive nuclear weapons.

In early January 1957, the State Department was concerned about the American policy on testing. While international opinion increasingly favoured some sort of action or agreement which would limit nuclear explosions, the American position remained static. During the previous year, important and influential powers had come out against testing. In 1956, the U.S.S.R. had proposed the immediate cessation of nuclear tests independent of any agreement on other disarmament questions. This proposal had won the endorsement of Japan and India. In addition, two NATO allies, Britain and France, had shifted their positions on testing away from the traditional American policy
and closer to the Soviet position.\(^2\) Despite the rising international pressure against testing, the Eisenhower administration maintained its existing policy throughout 1956 and into 1957, refusing to negotiate an agreement on testing separate from other conditions. Limitations on testing would not be considered until the other nuclear powers agreed to halt the production of all nuclear weapons (including their materials) and to implement an effective inspection system.\(^3\)

In order to sustain a policy which was so unpopular with the rest of the world, the Eisenhower administration realized that it needed to regain the support of the NATO Allies, especially Britain. In 1956, Anthony Eden had distanced British policy from the American when he stated his government’s willingness to consider limitations on nuclear tests independent of a general disarmament agreement. On January 22, 1957, the new prime minister, Harold Macmillan, reiterated his predecessor’s policy in the House of Commons. Like Eden, Macmillan felt the pressure of a growing anti-test sentiment in Britain.\(^4\)

By the end of March 1957, however, Washington had persuaded London to reverse its declared stand on testing. During the third week of March (21-24), Macmillan met with President


\(^3\) Telegram from the Department of State to the Embassy in the U.K., March 6, 1957, FRUS, 1955-57, 20: 463; Letter from Stassen to Commander Noble, March 5, 1957, FO371/129807, PRO, Kew.

\(^4\) Telegram from Aldrich in London to the State Department, January 22, 1957, Series III, WHOSAD, DDEL, Abilene.
Eisenhower in Bermuda. The main purpose of this conference was to reconstruct the alliance between Britain and the United States shattered by the Suez Crisis in 1956.\footnote{Harold Macmillan, \textit{Riding the Storm} (New York, 1971), 298, 317.} A variety of common problems were discussed including the Middle East, NATO, and the reunification of Germany. In addition, the participants spent quite a lot of time conferring about nuclear weapons tests. It was during one of these meetings that Eisenhower and his advisors managed to persuade the British prime minister to change his public stand on testing. Aware of the international opposition building against testing, Eisenhower put forth an idea that Lewis Strauss had proposed to him. In order to calm public fears about the dangers of testing, the AEC Chairman had recommended that the U.S. and Britain make a joint public declaration indicating their intention to continue testing "but not beyond the point of safety." Initially showing little enthusiasm for this public relations strategy, Macmillan explained to the president that there was a growing feeling in Britain that nuclear explosions should in some way be limited.\footnote{In early 1957, Gallup asked the British public whether they believed the claims of some scientists that nuclear tests were "a very serious threat to our health and to the health of future generations." In response, 54\% said these fears were "well-founded," 21\% "not well-founded," and 25\% "don't know." When asked: "Do you approve of Britain's decision to carry out the H-Bomb tests?" 44\% answered "disapprove," 41\% "approve," and 15\% "don't know." See George Gallup, \textit{The Gallup International Public Opinion Polls: Great Britain, 1937-1975} (New York, 1976), I: 409.} Because of his concerns about his own domestic political situation, the British leader wanted
to avoid giving the impression that the U.S. and Britain were going to go on indefinitely with their tests. If the two countries were to make a joint declaration, it should indicate that both were seriously interested in limiting these tests. Eisenhower did not agree. Although he was aware of the escalating international opposition, he did not think that either Britain or the U.S. should make any commitment to circumscribe their testing programs. In his view, the key was to make it look as if the two countries were imposing limits while "at the same time maintaining sufficient latitude to continue necessary tests."\(^7\)

In the end, Macmillan agreed to issue a declaration similar to the one suggested by Eisenhower on Strauss' advice. In their joint statement, Britain and the United States affirmed that continued nuclear testing was necessary in order to protect the security of the "Free World," while at the same time they voiced their readiness to register their future tests in advance with the UN, if the Soviet Union agreed to do the same.\(^8\) The pronouncement further claimed that an agreement to limit testing was not now possible because it "could not be effectively enforced for technical reasons nor could breaches of it be surely detected." Until these technical problems could be worked out, both countries would have to continue to test, but they would do so safely, only in "such a manner as would keep world radiation

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\(^7\) Memo of Conversation at Bermuda, March 22, 1957, Trips and Meetings Series, Folder: "Bermuda 1957," WHOSS, DDEL, Abilene.

\(^8\) This was a nod to the proposal put forward by the Norwegians in late 1956.
from rising to more than a small fraction of the levels that might be hazardous."  

This last assurance was intentionally hazy. The White House wanted to make it appear that the U.S. had modified its position on testing when in fact it had not. As Secretary of State Dulles explained to Congress the day after the Bermuda Conference, the declaration had been "largely psychological in purpose." It did not represent a shift in U.S. policy. The statement did represent a reversal in the declared British position, however, and Macmillan was very much aware of the negative impact that it would have on public opinion back home. That is why he insisted on the inclusion of the reference to "technical reasons" in the public statement. Prior to Bermuda, neither the British nor the Americans drew much attention to the technical difficulties involved in detecting nuclear tests. In fact, most of the British and American scientists, including the AEC scientists, argued that such detection was relatively simple. However, Macmillan had insisted on including this reference to technical problems as a way of justifying the shift in his government's

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9 Bermuda Communiqué, Telegram from American Delegation at Bermuda to the State Department, March 24, 1957, Series III, WHOSAD, DDEL, Abilene; Memo from Herbert Scoville, Assistant Director for Scientific Intelligence to the Director, CIA, May 11, 1957, 00311, National Security Archives, Washington.

10 Bipartisan Congressional Meeting Minutes, March 25, 1957, Folder: "Legislative Meetings 1957 (2)" AWF, DDEL, Abilene.


12 See, for example, the Minutes from the Meeting of the President's Special Committee on Disarmament, May 1, 1957, Series I, WHOSAD, DDEL, Abilene.
position. He knew that he needed a good reason to explain why he had gone back on Eden’s promise to seek an agreement on tests independently of general disarmament. In his report to Parliament on April 2, the prime minister argued, rather lamely, that it would be wrong for his government to limit testing prior to the establishment of a "practical system" which could detect all tests. The government would go ahead with its next test series.

Not unexpectedly, the Opposition was dissatisfied with this explanation. Outraged by Macmillan’s apparent acquiescence in the American policy, the Labour representatives in the House of Commons pressed the prime minister to explain the real reason for the shift in the British position regarding nuclear testing. If "technical reasons" were the main cause, then why had distinguished physicists, as of April 1, been telling the British people that it was relatively easy to detect hydrogen explosions from afar? Unable to provide a good answer, Macmillan evaded the question, telling the House that he would deal with the issue at a later date.

\[\text{\textsuperscript{13}}\text{Memo of Conversation, Department of State, April 3, 1957, DSRG 59, 711.5611/4-357, NA; Memo of Conversation, April 9, 1957, DSRG 59, 711.5611/4-957, NA, Washington.}\]
\[\text{\textsuperscript{14}}\text{Telegram from London to the USIA, April 2, 1957, Series III, WHOSAD, DDEL, Abilene.}\]
\[\text{\textsuperscript{15}}\text{Macmillan, Riding the Storm, 262.}\]
\[\text{\textsuperscript{16}}\text{Telegram from London to the USIA, April 2, 1957, Series III, WHOSAD, DDEL, Abilene.}\]
\[\text{\textsuperscript{17}}\text{Telegram from London to the Secretary of State, April 3, 1957, Series III, WHOSAD, DDEL, Abilene.}\]
The British press was also critical of Macmillan's new stand. The *Daily Mirror* commented on the pain of watching the "contortions of a government which changes its mind and refuses to admit fact." This paper also speculated that Macmillan had agreed to the joint declaration because of a deal made with the Americans on Intermediate Range Ballistic Missiles (IRBMs).\(^\text{18}\)

The official records support this theory. After the conference, both countries revealed that an agreement had been reached whereby "certain guided missiles would be made available by the U.S. for use by British forces."\(^\text{19}\) At a meeting during the conference, when Eisenhower consulted with Dulles, Quarles, Strauss, and others about the possibility of supplying the British with IRBMs, the president also discussed the proposed joint declaration on testing.\(^\text{20}\) A few days after the conference, the secretary of state explained to a congressional gathering that the U.S. was planning to hand over a number of IRBMs to the British by mid-1958. As he pointed out, this agreement was "something of an economy" for the United States since the U.K. was providing the bases for the American missiles. It would also be good for Great Britain, since her retaliatory position against

\(^{18}\) Telegram from London to the State Department, March 29, 1957, Series III, WHOSAD, DDEL, Abilene.

\(^{19}\) Bermuda Communiqué, Telegram from the U.S. Delegation at Bermuda to the Secretary of State, March 24, 1957, Series III, WHOSAD, DDEL, Abilene.

\(^{20}\) Memo of Conversation with the President, March 22, 1957, International Trips and Meetings Series, Folder: "Bermuda -- Substantive Questions (1)," WHOSS, DDEL, Abilene.
the Soviet Union would be strengthened.\textsuperscript{21} Like all deals, however, this one had a price. As part of a tacit quid pro quo, the British government apparently had to agree to the joint declaration on testing designed by the Americans.

In the aftermath of the Anglo-American declaration, both countries proceeded with plans to test more nuclear weapons. The British government announced its intention to carry out a series of H-Bomb tests near Christmas Island\textsuperscript{22} and the American government prepared a similar series, code-named "Plumbbob", which was to take place at the Nevada Test Site in the United States.\textsuperscript{23} Both series were scheduled to begin in late April 1957.

Paradoxically, the preparation for these tests took place at the same time that the United Nations Disarmament Subcommittee reconvened in London on March 18, 1957. The American delegation was led by Harold Stassen, the President's Special Assistant on

\textsuperscript{21} Minutes of Bipartisan Congressional Meeting, March 25, 1957, "Legislative Meetings 1957 (2)," AWF, DDEL; Macmillan, Riding the Storm, 245. In his memoirs, Macmillan confirms that the details of the IRBM deal were settled at Bermuda.

\textsuperscript{22} Telegram from London to the USIA, April 2, 1957, Series III, WHOSAD, DDEL, Abilene.

\textsuperscript{23} Editorial note, FRUS, 1955-57, 20: 491; Richard Miller, Under the Cloud: the Decades of Nuclear Testing (New York, 1986), 251-293. During the American series, which began on April 24 and continued until March 14, 1958, at least thirty-four nuclear explosions were detonated in Nevada. According to Miller, the "Plumbbob" series was the "biggest, longest and most controversial in the history of the Nevada testing." A total of 18,000 military personnel took part in combat exercises called Desert Rock VII and VIII.
Disarmament since 1955. From the beginning, it was obvious that the U.S. was not interested in making any real progress in these talks. One of the main problems faced by Stassen was the resistance in the administration to any change in policy which might result in an agreement on testing or disarmament. Another problem was the deteriorating relationship between Stassen and the White House. Secretary of State Dulles disliked Stassen and had always been jealous of his semi-independent position as the president's Special Assistant. In addition, Stassen had "stumbled into the quicksand of Republican politics" in 1956, when he had decided to support Christian Herter for the vice-presidential nomination, rather than Richard Nixon. As a result of the president's concerns about Stassen's political loyalty, and his desire to please his secretary of state, Eisenhower placed his Special Assistant under the direct control of Dulles prior to the talks in London. This was clearly a demotion. Stassen was informed that Dulles was now his superior and that he would no longer be allowed to attend either Cabinet or NSC meetings unless the agenda specifically included

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24 The U.S. delegation, including Stassen, consisted of 11 members representing all the responsible departments. This delegation met together every morning and sent 2 telegraphs daily to the State Department. See Memo of Conversation, May 23, 1957, NSC Series, Folder: "324th Meeting of the NSC," AWF, DDEL, Abilene.

25 Macmillan, Riding the Storm, 304.

26 Hewlett and Holl, Atoms for Peace and War, 348-49.
disarmament questions.\textsuperscript{27}

According to Hewlett and Holl, this was a "brilliant solution" on Eisenhower's part. By demoting the Special Assistant on Disarmament, the president managed to save Stassen's position, and at the same time strengthen Dulles' hand and vindicate Nixon.\textsuperscript{28} Nevertheless, the president's solution also had negative repercussions. By discrediting his disarmament advisor on the eve of his trip, Eisenhower ensured that Stassen would have a very difficult time making any progress in the negotiations in London. At the beginning of the talks, even the British were aware that Stassen lacked the support of his own administration. Although the British negotiators took Stassen seriously because he was the president's appointed disarmament representative, they realized that he had little backing in his own government. Sir Patrick Dean, a member of the British Foreign Office, was not at all confident about Stassen's future as the president's disarmament representative. He presciently predicted that "In the long run, I expect the State Department, and the Pentagon, not forgetting the Atomic Energy Commission, to prevail over Mr. Stassen."\textsuperscript{29}

Before leaving Washington, Stassen and the other American delegates had been instructed to adhere to the traditional U.S.

\textsuperscript{27} Hewlett and Holl, \textit{Atoms for Peace and War}, 382; Stephen Ambrose, \textit{Eisenhower: The President} (New York, 1984), 401.

\textsuperscript{28} Hewlett and Holl, \textit{Atoms for Peace and War}, 382.

\textsuperscript{29} Hand-written note from P. Dean to I.T.M. Pink, Foreign Office, April 29, 1957, FO371/129812, PRO, Kew.
position on testing. But once the talks began, Stassen became convinced that an accord with the U.S.S.R. would be possible if the United States was more flexible on the testing issue. During the meetings, the Soviets continued to push for an accord on testing separate from a more comprehensive disarmament agreement. According to some analysts, especially those in the American and British defense bureaucracies, the Russian proposal was motivated only by the desire to maintain the propaganda advantage. However, some of the participants in the negotiations, particularly the American and the French delegates, believed that the Soviets were motivated by other concerns. According to these delegates, the Russians sincerely wanted an agreement on testing because of their concerns about proliferation and the economic costs of the arms race.

Soviet concerns about proliferation came up repeatedly in the talks in London. The Russian delegates made it clear that they were not so much concerned about what the U.S. might do with its nuclear weapons, as they were that an irresponsible "4th power" might initiate a chain of events that would involve the


U.S.S.R. in a nuclear war. The Soviets realized that, although a test ban agreement would not necessarily prevent proliferation, it would slow it down. It was possible for a "4th country" to produce limited numbers of low-yield, inefficient atomic weapons without testing as long as it had the technological know-how, the design specifications and the necessary fissionable material. However, if a country wanted to produce sophisticated, high yield atomic and hydrogen weapons of advanced design, testing was necessary. According to this reasoning, then, an agreement to ban tests would not make the proliferation of all types of nuclear weapons technically impossible, but it would make it much more difficult to develop the most advanced types. It might be difficult to persuade all potential 4th countries to adhere to such a treaty, but these countries would undoubtedly hesitate to conduct nuclear tests in the face of an accord signed by influential powers such as the Soviet Union, the United States and Great Britain.

Finding the Soviet argument to be persuasive, Stassen believed that it would be in the U.S. interest to agree to some limitation on testing. In his view, such an accord would contribute to the security of the United States, "primarily because of the hesitancy of potential 4th countries to develop


weapons programs clandestinely.\textsuperscript{35} If such an agreement was not reached, Stassen predicted, it was certain that countries such as China and France would develop a nuclear weapons capability within the next 5-10 years.\textsuperscript{36} From Stassen's perspective, it was to the U.S. advantage to seize this historic moment and agree to some sort of limitation on tests before proliferation got totally out of control. Worldwide support for an accord was at a peak because of concerns about radioactive fallout. The time was ripe for the U.S. to put forward a new proposal at the United Nations. According to Stassen, a strong majority, perhaps as many as two-thirds of the UN General Assembly, were in favour of the cessation of nuclear tests in the spring of 1957.\textsuperscript{37} Although Canada had followed the British lead and retreated from its earlier stand on testing,\textsuperscript{38} other NATO countries, such as Germany and France, still called for limitations. In both these countries, public opinion favoured an accord to end testing even

\textsuperscript{35} Ibid.

\textsuperscript{36} Reply to Question re: "4th countries", April 16, 1957, Series I, WHOSAD, DDEL, Abilene.

\textsuperscript{37} UN Delegation's Proposal for a Twelve Month Moratorium on Tests, April 13, 1957, Series I, WHOSAD, DDEL, Abilene; A similar proposal is found in a Telegram from the Embassy in the U.K. to the Department of State, April 13, 1957, \textit{FRUS, 1955-57, XX}: 469-70.

\textsuperscript{38} Joseph Levitt, \textit{Pearson and Canada's Role in Nuclear Disarmament and Arms Control Negotiations, 1945-1957} (Montreal, 1993), 240-49. Canada's calls for limitations on testing came to an end once Britain reversed its earlier stand in March, 1957. According to Levitt, the Canadian government re-aligned its position with the US and Britain because it wanted to help maintain Western unity. When the Conservatives came to power under John Diefenbaker on June 11, the Canadian delegates were instructed to "follow the American lead" in the Subcommittee discussions.
without an agreement on disarmament. ³⁹ Although the German
government had pledged never to develop its own nuclear weapons,
the French government had decided to go ahead with its own
nuclear program if an accord was not reached among the nuclear
powers. ⁴⁰ Even more important, however, was the change in the
Soviet attitude. In Stassen's view, there was a greater prospect
of obtaining Russian agreement to a treaty "now than there had
been at any point in the past eleven years." Therefore, Stassen,
supported by the other American delegates in London, decided to
recommend that Washington formally consider a limited treaty,
which would suspend all nuclear testing for a period of twelve
months, beginning in August 1958. During this period, an
effective international inspection system would be established. ⁴¹

When Stassen personally delivered this proposal to high
officials during the Easter recess at the London talks, it met
with predictable opposition. Eisenhower warned him that it would
be very difficult to alter the government's policy on testing.
Because there was so much resistance within the administration,
the president predicted that the "U.S. might be the hardest to

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³⁹ A Note on West European Attitudes towards Banning Atomic
Tests," Report #45, March 26, 1957, WE-45, RG 306, Records of the
U.S. Information Agency, NA, Suitland, Maryland.

⁴⁰ Conference at State Department on Disarmament, May 17,
France was particularly worried about the spread of nuclear
weapons to Germany.

⁴¹ UN Delegation's Proposal for a Twelve Month Moratorium on
Tests, April 13, 1957, Series I, WHOSAD, DDEL, Abilene.
convince on the limiting of tests." And he was right. As usual, the most vociferous opposition came from the bureaucracies who had the most to gain from the continuation of testing, the Defense Department and the Atomic Energy Commission. The DOD saw no reason why it should support the proposal submitted by Stassen. From Defense's perspective, any proposal which did not demand the establishment of an effective control system which would provide complete ground and aerial inspection of the Soviet Union was simply not worth considering. The AEC was equally obstinate. Chairman Strauss insisted on the establishment of an effective inspection system prior to any agreement on tests. He was very worried about the effect that a twelve month moratorium would have on his agency's weapons program, fearing that such a cessation would mean the end of the U.S. weapons program since scientists would leave and go to other laboratories. He also anticipated that public opinion would make it difficult for the AEC to resume testing after a moratorium. Admiral Paul Foster, also of the AEC, shared the Chairman's anxieties. He explained to the president that an agreement to stop testing for this period of time was like asking a person to "stop breathing" for three hours. There was also the "danger" that the accord might be extended beyond the twelve

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43 Department of Defense Memo to State, May 9, 1957, Series III, WHOSAD, DDEL, Abilene.

44 Memo of Conversation, Department of State, April 20, 1957, FRUS, 1955-57, XX: 478.
months and set a precedent for other disarmament agreements.\textsuperscript{45}

Although the AEC and the DOD worried about the dangers involved in limiting weapons tests, they did not convey nearly as much concern about the dangers of proliferation. During one meeting, Strauss and representatives from Defense all questioned the claim that proliferation was a serious threat to national security.\textsuperscript{46} During another meeting, Colonel Thomas W. Abbott, from Defense, doubted that "it would endanger U.S. security if nuclear weapons spread to additional countries."\textsuperscript{47} As was often the case, the State Department disagreed with the negative conclusions of the DOD and AEC. John Foster Dulles (and his brother, CIA director, Allen Dulles) were in accord with Stassen that proliferation did entail serious risks for U.S. security.\textsuperscript{48} The spread of nuclear weapons to 4th countries, especially non-NATO nations, would obviously contribute to international instability.

The State Department also concurred with other parts of Stassen's analysis. It accepted that the Soviets might have a genuine interest in limiting tests because of their concern about

\textsuperscript{45} Minutes from the Meeting of the President's Special Committee on Disarmament," May 1, 1957, Series I, WHOSAD, DDEL, Abilene.

\textsuperscript{46} Memo of conversation, May 24, 1957, NSC Series, WHOSANSA, DDEL, Abilene.

\textsuperscript{47} Minutes from the Meeting of the President's Special Committee on Disarmament, May 1, 1957, Series I, WHOSAD, DDEL, Abilene.

\textsuperscript{48} Minutes from the Meeting of the President's Special Committee on Disarmament," May 1, 1957, Series I, WHOSAD, DDEL; Memo of conversation, May 24, 1957, NSC Series, WHOSANSA, DDEL, Abilene.
the proliferation of nuclear weapons to other countries like West Germany and China. In addition, the State Department also believed that the Soviets had economic reasons for wanting to reach an agreement on testing. On April 20, the Soviet Union had sent a letter to the British government emphasizing their economic concerns. In this message, which was addressed to Prime Minister Macmillan, Premier Bulganin began by calling for a rapprochement with the West on the issue of disarmament. Because of the heavy cost of the arms race, he argued, the Soviet Union wanted the western powers to reconsider their position and agree to suspend testing for a specified period of time with a view towards reaching an eventual agreement on the final cessation of nuclear tests. When the State Department learned of this letter, it did not reject the Soviet overture as a propaganda ploy. Instead, the department admitted that the letter, among other things, might convey a "genuine concern about the nuclear situation." Bulganin's statements on nuclear weapons tests were consistent with the Soviet position of the


51 Ibid. In the letter, Bulganin also chastised the British government for its earlier support of German rearmament and admission into NATO in 1955. He further asked "Do not the U.S. plans ... for arming the West German army with atomic weapons testify to the fact that while the peoples more and more persistently demand that atomic weapons be prohibited and destroyed, intensive preparations for an atomic war are being carried on in the NATO group?"

last twelve months and there were "definite signs that the burden of Soviet military forces was weighing heavily on them."^53

In London, the French delegates gave support to this interpretation of Soviet motivations. During a meeting with other western powers, the French delegates argued that the Soviet proposal for the cessation of tests was not just a propaganda bluff. They agreed with the American delegates that the Soviet position on testing was motivated by genuine concerns about proliferation and economic costs. According to these French delegates, the Soviets were suffering from economic strains brought on by the need to satisfy demands for a higher standard of living in the Soviet Union and by the deteriorating situation in the satellite countries (especially Hungary). Because the arms race was adding a further burden to the economy, the French believed that the Soviets advocated a cessation of tests as a "first step" towards a more comprehensive agreement.^54

On April 26, the Soviets made a proposal to the West regarding inspection which indicated that they were willing to make a substantial concession in order to get an agreement on the testing issue. For the first time, the Soviets agreed to open up a large area of their own territory to aerial inspection, if the U.S. and Western Europe reciprocated. As the British pointed out, this was a major concession. Because the U.S Defense Department had originally advanced the idea of aerial inspections

^53 Ibid.

as a means of securing intelligence, the Russians had consistently rejected the idea.\textsuperscript{55} Even though the DOD could hardly fault the principle of mutual aerial inspection, it rejected Moscow's proposal on the grounds that the Soviets were not willing to open up all of their territory to aerial overflights. The State Department was a little more enthusiastic, emphasizing that this was the first time that the Soviets had come up with anything concrete in the area of aerial inspection. Stassen was also positive. He believed that the concession was based on real Soviet concerns about their own security. The Russians were increasingly anxious about American plans to establish nuclear weapons on several bases along the Soviet periphery, including Turkey, Iran, Japan, and Western Europe.\textsuperscript{56} In Stassen's view, the Soviets made the concession on overflights because they "were willing to trade some increase in

\textsuperscript{55} Memo from I.T.M. Pink, Foreign Office, to Patrick Reilly, Moscow, July 15, 1957, FO371/129816, PRO, Kew.

\textsuperscript{56} In April, the Soviets submitted a memo to the Subcommittee stating that the "presence of military bases in foreign territory has of late greatly intensified suspicion and tension, particularly since [U.S.] atomic military formations are stationed, or it is planned to station such formations, at many of them .... This situation represents a serious threat to the peace and security of peoples ...." See Soviet Memo Submitted to the Disarmament Subcommittee: Implementation of Partial Disarmament Measures, Document 203, Prepared by the State Department, April 30, 1957, Documents on Disarmament, 1945-59 (Washington, D.C.), II: 778-787. Many messages conveying this growing sense of Soviet insecurity had already been sent to the State Department earlier. See, for example, Telegram from Moscow to Secretary of State, January 23, 1957, 711.5611/1-2357; Telegram from Moscow to the Secretary of State, January 24, 1957, 711.5611/1-2457; Office Memo of the U.S. Government, January 25, 1957, 711.5611/1-2557; Telegram from Paris to the Secretary of State, January 29, 1957, 711.5611/1-2957; all of these documents are found in DSRG 59, NA, Washington.
U.S. security for some increase in their security."\footnote{57}

Given the international climate, Stassen had a strong case for his proposal but he continued to confront opposition from his own administration. During a meeting on May 25, when Chairman Strauss met with Stassen, representatives from the State Department, the Atomic Energy Commission and the Defense Department, he repeated his insistence on setting up an effective inspection system prior to any agreement to limit testing. According to him, the United States could not negotiate with the Soviet Union except from a position of strength. Although the U.S. could maintain numerical superiority in nuclear weapons over the Soviet Union, the Russians eventually would have enough weapons to render the American lead meaningless. In Strauss' view, the only safe course for the United States was to try to maintain a qualitative lead over the Soviets in nuclear weaponry.\footnote{58} This would, of course, require a continuation of testing.

Given this perspective, which was supported by the Defense Department, it was a foregone conclusion that Stassen would fail to muster much support for a new American proposal. As Secretary Dulles explained during a National Security Council meeting in May, "very considerable differences of view remain in the U.S. government as to how the disarmament plan should be

\footnote{57} Minutes from the Meeting of the President's Special Committee on Disarmament, May 1, 1957, Series I, WHOSAD, DDEL; State Department Meeting, May 17, 1957, Administration Series, Folder: "Disarmament Talks," AWF, DDEL, Abilene.

\footnote{58} Hewlett and Holl, \textit{Atoms for Peace and War}, 393.
developed." Although the president and the State Department realized that they should respond in some way to the increasing international pressure in favour of a cessation of testing, they knew that a change in policy would not find acceptance in the defense bureaucracies. Therefore, Stassen returned to London from Washington after the Easter recess without a new proposal. The president did give him permission to discuss elements of his proposal with the NATO allies and the Russians, but only in a tentative manner.60

Secretary Dulles later announced to the press that the president had authorized Stassen to pursue a shift in American policy. Because this was a misleading statement, Eisenhower held another press conference, at which he reaffirmed the traditional American position. According to the president, continued testing was necessary to perfect new weapons designed to defend the nation against attack. Only a comprehensive disarmament agreement, one that would forever ban the use of these weapons in war, would lead the United States to give up testing permanently.61

Impatient with the inflexibility of his government, Stassen decided to take an increasingly independent course when he returned to London. During the talks, he revealed his proposal

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61 Ibid.
to the French and British diplomats. Not waiting for their approval, he then gave the Chairman of the Soviet Delegation, Valerian Zorin, an informal memo which indicated that the U.S. Delegation was prepared to favourably consider the acceptance of the U.S.S.R. proposal for a temporary cessation of nuclear tests, provided the U.S.S.R. was prepared to favourably consider the acceptance of the U.S. proposal for the cessation of the manufacture of fissionable material for nuclear weapons. Although some form of inspection system was important to such an agreement, the memo implied that the United States would be willing to negotiate an accord before the system was in place.

Stassen's overture to the Soviets got him into hot water with both the American and the British governments. Soon after he learned of this memo, the British Minister of State let Stassen know that his government was "very put out by this bombshell." It was not so much the substance of the memo which bothered the Minister, as the "method of operation" which seemed to abuse the principle of Four Power consultation which had always applied to disarmament. Although the British did not mind if Stassen met with the Russians informally outside the Subcommittee, they had been under the impression that he would follow proper NATO procedure and consult them (and the French and Canadians) before giving the Russians anything in writing.

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62 Divine, Blowing on the Wind, 145.

63 Informal Memo from Governor Stassen to Zorin, May 31, 1957, NSC Series, WHOSANSA, DDEL, Abilene.
regarding testing and disarmament."

On June 3, Macmillan wrote a letter to Eisenhower conveying his dismay. The president responded by recalling Stassen to Washington and by apologising profusely to the British prime minister. Explaining that he was both chagrined and astonished when he learned about Stassen's memo, he assured the British leader that there was "no agreed-upon American position which [could be] interpreted as a basis of negotiation with the Soviets."\(^6^5\)

The Eisenhower administration's attempts at damage control did not prevent the press from getting hold of the story. Many commentators were critical of Stassen's tactics. As the St. Louis Globe Democrat put it, the need for some progress in the matters of disarmament and testing was great "but nothing must be done, no diplomatic short cuts permitted, which would put new strains on Western European unity and NATO purpose." Some commentators were more sympathetic to Stassen's cause. Herbert Block, the leading cartoonist in the United States, depicted Stassen as a man doggedly pursuing an agreement, while others in the administration, such as Dulles and Strauss, proceeded to knife him in the back.\(^6^6\)

On June 11, the secretary of state rebuked Stassen during a


\(^{6^5}\) Telegram from Eisenhower to Macmillan, June 4, 1957, International Series, AWF, DDEL, Abilene.

\(^{6^6}\) Telegram from British Embassy in Washington to Foreign Office, June 19, 1957, FO371/129825, PRO, Kew.
press conference. When asked whether there were any substantive differences in the allies’ position towards testing and disarmament, Dulles responded in the negative, arguing instead that the problem had arisen because Stassen had failed to follow proper diplomatic procedure. Because of this failure, Stassen’s recall was "wholly justified." Dulles was on shakier ground when the press asked him about divisions within the administration. Hitting the nail right on the head, one journalist asked:

Mr. Secretary, isn’t one of the problems further complicating the situation what might be called an unresolved conflict within the American Administration as to how to proceed basically? I mean by that, a body of thought within the Administration ... [that] wants to go further with ... respect to cessation of tests of weapons, ... and another body of thought against that sort of thing?

Unwilling to answer this question truthfully, the secretary of state dissembled, stating that "I think that the differences within the U.S. Administration have been authoritatively resolved."

In June, the Americans were forced to re-think their position on testing yet again because of renewed pressure from the Soviets. At this time, the State Department received information from the FBI indicating that the Soviets might soon announce a unilateral postponement of nuclear testing for a one
year period.\textsuperscript{70} In addition, the U.S.S.R. made another important concession during the Disarmament Subcommittee talks. On June 14, the Russian delegates in London accepted the principle of setting up inspection posts, under the supervision of an international agency, within the territories of the U.S.S.R., the U.S. the U.K., and in the Pacific, as part of an agreement to suspend testing.\textsuperscript{71} In London, the four Western delegations agreed that the new Soviet position was "indeed significant" since the USSR had "never before accepted control over cessation of tests."\textsuperscript{72} The British Foreign Office took the concession very seriously, calling it a "step forwards."\textsuperscript{73} According to Harold Macmillan, the Soviet Union was becoming more flexible in its policy towards the West at this time because of changes taking place in the Russian government. In the Kremlin, another power struggle had taken place in which Khrushchev emerged the victor (with Bulganin and Zhukov, at his side) and Malenkov and Molotov

\textsuperscript{70} Memo, June 12, 1957, OCB Central Files Series, WHONSC Staff: Papers, DDEL, Abilene.


\textsuperscript{72} Third Weekly Report to the Atlantic Council by the Canadian, French, United Kingdom and United States Delegations to the United Nations Disarmament Subcommittee, June 21, 1957, 00320, NSA, Washington.

\textsuperscript{73} Memo from I.T.M. Pink, Foreign Office, to Sir Patrick Reilly, Moscow, July 15, 1957, FO371/129816, PRO, Kew.
the losers.  

The Soviet concession put the United States in a difficult situation. Since the Western delegations had insisted that inspection was an essential part of any agreement, the American government could not afford to reject the Soviet overture as a propaganda bluff. Instead, the State Department, in consultation with the DOD, AEC and CIA, drafted a proposal stating that, although the United States intended to continue with its testing program, it would exert every effort to achieve the first phase of a disarmament agreement by November 1, 1958. As part of this first phase, all parties to the accord would be required to stop testing for twelve months, during which time the nuclear powers would set up an adequate inspection system and agree to halt the production of nuclear weapons. If a comprehensive disarmament accord had not been reached during the twelve months, the U.S. would resume testing immediately.

Although this appeared to be a new proposal, it did not represent much of a departure from previous American policy. The agreement to suspend testing was still linked to more comprehensive disarmament measures. However, it did allow the United States to blame the Soviet Union for the lack of progress


in the negotiations, despite the latter's striking concession on on-site inspection. Because of the American superiority in nuclear weapons, the government knew that the proposal would be unacceptable to the Russians. The government in the U.K. also disliked it. As the British Foreign Office described the situation, the "American basement is already so full of bombs that they hardly have room for any more." The British basement "was nothing like as full as we would like it" and it was assumed that the Russian basement also had "plenty of room in it."

Given this imbalance, combined with the fact that the United States had recently begun another extensive series of tests in Nevada, it was highly unlikely that the proposal would be taken seriously. Unwilling to accept an agreement that would give the United States an unfair advantage, the Soviet Union rejected the American offer the following month and countered it with another -- to suspend testing for three years under a system of international supervision.

In his memoirs, Eisenhower suggests that he was very interested in achieving a ban on the testing of nuclear weapons in the summer of 1957. However, his lukewarm support of the June proposal shows that he was not truly committed to reaching an agreement with the Soviets on this issue. During a press

77 Memo from I.T.M. Pink, Foreign Office to Reilly, July 15, 1957, FO371/129816, PRO.
78 The "Plumbbob" series began in late May.
79 Divine, Blowing on the Wind, 153, 155.
80 Eisenhower, Waging Peace, 476.
conference, held on June 19, the president, while expressing his
general approval of the recently announced American proposal,
indicated that he had serious reservations about the provision
for a ten-month suspension of testing. When asked about the
possibility of suspending tests without an inspection system in
place first, the president became very agitated. "If I gave that
impression, I made a very grave error," he answered. Sounding a
lot like Strauss, Eisenhower suggested that any moratorium would
have to be carried out "under such a method that we both knew
exactly what we were doing and then ... using that interval to
work out something in which we could have real confidence." 81

After this press conference, the president had a meeting
with Strauss and a small group of scientists which intensified
his reservations about limiting the American testing program. 82
On June 24, Strauss introduced Eisenhower to three atomic
scientists from the Lawrence Livermore Laboratory -- Ernest
Lawrence, Edward Teller and Mark Mills. 83 Lawrence told the
president that the American scientists now knew how to make
"virtually clean [nuclear] weapons, not only in the megaton
range, but all the way down to small kiloton weapons." In his

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82 Telegram to Stassen in London from Secretary Dulles, July 1, 1957, Administration Series, Folder: "Stassen, Harold E. 1957 (2)," AWF, DDEL, Abilene.

83 These scientists were in Washington as witnesses testifying in support of "clean" nuclear weapons before the Joint Congressional Committee on Atomic Energy. See Hewlett and Holl, Atoms for Peace and War, 399-400.
view, it would be a "crime against humanity" if the U.S. failed to go ahead with the development of these weapons. Edward Teller, "father of the H-Bomb", supported Lawrence's argument. According to him, these new, radioactive-free, easily packaged, thermonuclear weapons could be used for both tactical and defense purposes. They might also have some peaceful applications: they might be used to release oil from strata, to produce steam in deep large cavities, to modify the flow of rivers, or "perhaps, even to modify the weather on a broad basis through changing the dust content of the air."

Eisenhower was very impressed with the alleged possibilities of these "clean" bombs. In his view, "no one could oppose the development program the scientists were describing." However, as he pointed out, his administration was up against an extremely delicate situation with respect to world opinion and he could not afford to let his government be "crucified on a cross of atoms, so to speak." Because of the public relations problems created by testing, the president asked the scientists if he could say that no possible harm could come to humanity from the tests of these weapons. According to the scientists, there might be some miniscule effects, but these would be "extremely low in relation, for example, to the difference in radioactive exposure of people

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84 Memo of Conversation with the President, June 24, 1957, Diary Series, AWF, DDEL, Abilene. A sanitized version of this memo is also found in FRUS, 1955-57, XX: 638-640.

85 Ibid.

86 Ibid.
at sea level as against people at the elevation of Denver Colorado.  

Satisfied by this seemingly authoritative argument, Eisenhower concluded that the information about fallout provided by the scientists could be very useful for public statements. If he was asked, at his next press conference, why the United States refused to suspend its testing program, he would explain that the objective of American tests was to "clean up weapons and thus protect civilians in the event of war."

Although the president seemed satisfied, even impressed, with the scientists' claims about "clean" bombs, others were more skeptical. The State Department received criticisms from all over the world after the American scientists made similar claims during a news conference. From Moscow, Khrushchev scoffed that it was a "stupid thing to discuss clean atomic weapons -- [since] there could not be anything called a clean weapon that

87 In other words, people would be exposed to more radiation at high altitudes than they would be from nuclear tests.

88 Ibid. During earlier meetings with the State Department, the AEC made similar claims about American tests. In one meeting, Admiral Paul Foster explained that the "clean" bomb could be used against military targets exclusively, without contaminating the area downwind. He also expressed the view that the risk to health from the Strontium-90 (a radioactive isotope) generated by test explosions was nil and the potential danger from the genetic standpoint was negligible. See Memo of Conversation, State Department, April 9, 1957, DSRG 59, 711.5611/4-957, NA, Washington.

89 From the embassy in Morocco, Dr. Ahmed Benabud, rejected the scientists' claims on the grounds that recent American tests had been "dirty" rather than "clean." See Memo of Conversation, Department of State, July 15, 1957, DSRG 59, 711.5611/7-1557, NA. From Cambodia, Prince Nordon Sihanouk expressed fear that his people might be contaminated by these so-called clean weapons. See Message from Prince Nordon Sihanouk to the State Department, July 1957, DSRG 59, 711.5611/7-1557, NA, Washington.
does a dirty job." At the London talks, chief delegate Zorin criticized the Americans for coming up with this "myth ... in order to justify by some means their opposition to the discontinuance of atomic and hydrogen tests." The American press was also skeptical. Some journalists questioned the theoretical possibility of making "clean" nuclear weapons. What happened to the radioactivity that heretofore had been the by-product of all fissionable explosions? After an explosion or test, where did the radiation go? The AEC could not provide good answers to these questions. Admitting that there might be some radiation after an explosion, Strauss assured the press that there was no need to worry since it (the radiation) was "constantly running down, just like your watch runs down." Similarly, Ernest Lawrence suggested that the radioactivity simply "changed into a non-radioactive normal atom." Lawrence also relied on one of the AEC's standard arguments about natural radiation when he stated that "the fallout from the sun that we have experienced from the beginning of time is very much larger than the man-made fall-out." According to Strauss, the increase in radiation resulting from the tests was insignificant compared with the amount coming from other sources. His

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90 Pre-Press Conference Briefing, July 17, 1957, DDE Diary Series, AWF, DDEL, Abilene.


92 "Highlights of the Press Conference," Telegram from the Department of State to Stassen, June 24, Series III, WHOSAD, DDEL, Abilene.
scientists had estimated that the "average man" received about 7 roentgens of radiation in his lifetime from cosmic radiation and X-rays. If testing continued at the present rate, the "average man" would receive only 1/10 of one roentgen from this source, which was negligible compared to the amount coming from the sun.\footnote{Memo of Conversation, March 22, 1957, International Trips and Meetings Series, Folder: "Bermuda," WHOSS, DDEL, Abilene. Similar arguments were found in an AEC pamphlet which was distributed to the people who lived near the Nevada Test Site. See United States Atomic Energy Commission, Atomic Tests in Nevada (March 1957) in Howard Ball, Justice Downwind: America's Atomic Testing Program in the 1950's (New York, 1986), Appendix C.}

In addition to being unpersuasive, the arguments made by the AEC representatives were misleading and deceptive. The argument regarding natural radiation was obviously problematic since it failed to take into account the fact that people living and working near the test sites received a lot more radiation than the "average man" living far away. For those living and working near test sites, the amount of harmful radiation coming from the nuclear explosions was significantly greater than any background or "natural" radiation.

The claims about "clean" weapons were equally deceptive. The AEC and DOD (and presumably the president and the secretary of state) knew that many scientists doubted whether it was even possible to make such weapons. Dr. Alvin Graves, who supervised testing for the AEC, had argued (as recently as May 1957) that a truly clean thermonuclear bomb was technically impossible. According to him, the necessity for an atomic trigger meant that
some fallout would always result. Even non-scientists, like Harold Stassen, recognized that the Department of Defense and the Atomic Energy Commission were carrying out tests in the "Plumrbob" series which aimed, not only at making bombs more clean, but also more poisonous, more radioactive, and more dirty than ever before. Since late May, many tests had been conducted at the Nevada Test Site which released large amounts of radioactivity.

The AEC was well aware that people living and working near the site had been exposed to a very "dirty" nuclear test as recently as July. On July 5, the AEC had detonated "Shot Hood", the biggest and dirtiest hydrogen bomb ever tested above ground at the Nevada Test Site. Hundreds, perhaps thousands, of people living and working near the test site were exposed to very high levels of radioactivity. This was not the first time that people had been exposed to such high levels of radioactivity.

94 Divine, Blowing on the Wind, 130; The scientists in the British Defence Department made similar arguments. In the spring of 1958, they admitted that "no one yet knows how to make a pure fusion weapon; all such devices contain a 'trigger' fission device." According to them, the British H-Bombs tested in May of 1957 were "entirely dirty." See Top Secret Atomic Notes, May 5, 1958, PREM11/2545, PRO.


96 Miller gives a detailed description of the tests that were carried out in Nevada in 1957. See Under the Cloud, 251-293.

97 On January 24, 1978, Frank Putnam of the National Academy of Sciences admitted during questioning at a meeting of the Subcommittee on Health and Environment that Shot Hood had been the "dirtiest [nuclear] explosion in the United States." Moreover, in a letter dated July 7, 1980, Colonel William J. McGee of the Defense Nuclear Agency acknowledged that Hood had been the "largest device [bomb] detonated in the United States. It was a thermonuclear device and a prototype of some thermonuclear weapons currently in the national stockpile. The neutron output was comparable to that produced in some other tests...." See Miller, Under the Cloud, 266.
people were exposed to fallout from this test. Gilbert Fraga, an AEC radiation monitor at the site, realized right away that the bomb was dirty. With readings going so high that they went off the scale, he informed headquarters that "It’s hotter than hell up here." Ben Levy, a worker at the site, also reported a high level of radiation on his own body. He almost got laid off, because the AEC said he had had too much radiation. People living near the tests were also exposed to dangerous levels of radiation. After the test in July, an AEC consultant, Dr. John Willard, discovered very high readings of radioactivity near Belle Fourche, South Dakota. According to Willard, "she [Belle Fourche] was hotter than a two-dollar pistol." As a result of Willard’s alert, milk from dairies in the area was dumped and contaminated hay was burned. But the AEC was not pleased. Since the agency did not want information about its tests publicized, it reprimanded Willard, telling him that he was a "traitor." It was important to the AEC that information about the tests remain secret. According to Kay Millet, a woman who lived in Utah, the families living near the Nevada Test Site never received any warnings about the tests. They were never told to stay indoors during a test or to have their water checked afterwards. But after the tests, Millet started to notice strange things. Her dog had puppies and they died. Her rabbit had babies and they died. Right after one test, she put her tomato plants outside and they turned white and died. When the garden came up, she noticed that the "squash and tomatoes would get this light stuff on them, the leaves would get white and crusty and the squash
would be all yucky and the tomatoes did the same thing." Shortly
after, her two year old daughter developed the symptoms of
leukemia.98

By far, the people who received the most radiation were the
soldiers who were purposefully exposed to the tests. These
soldiers were told that they were taking part in a patriotic
experiment that was not dangerous. Robert Carter took part in
one of the military's "field maneuvers." He was seventeen years
old at the time. After witnessing Shot Hood, he and his platoon
were marched closer to ground zero where they would simulate
battle maneuvers devised to calculate their physical and
psychological responses to a nuclear blast. As they moved
closer, Carter felt like he was "just burning alive ... being
cooked." Ground zero was radiating 500 to 1,000 roentgens an
hour. (At the time, the acceptable AEC safety standard for its
own workers was 15 roentgens a year). Carter reported other
disturbing sights as well. While sweeping the area during their
maneuver some of the men in Carter's platoon saw cages and fenced
enclosures. Some contained animals "burned almost beyond
recognition." They also saw the burned remains of humans
shackled to the fences.99

When Carter and others reported what they had experienced
and seen, they were sent to a naval hospital for "deprogramming."
The soldiers were told not to talk, not to tell anyone what they

98 Carol Gallagher, American Ground Zero: The Secret Nuclear

99 Gallagher, American Ground Zero, 61-63.
had seen. According to a soldier named Robert Merron, who was twenty at the time, there was always the order that "You don't say anything about this to anyone at any time." There was also an implied punishment: "If there's a breach in our security and you're responsible for it ... You can bet that they would keep their word on it. In the Marine Corps, threat is the primary motivating force."\(^{100}\)

In the summer of 1957, Martha Bordoli Laird decided that the people living and working near the Nevada Test Site had suffered enough. Two of her young children had developed cancer and another had an inactive thyroid. She knew of many other families whose health had been affected in similar ways. Therefore, she decided to write a letter to the AEC:

We, the residents of the area immediately adjacent to the Nevada test site, which the AEC has designated as "virtually uninhabited", feel that the health and welfare of our children and ourselves have been seriously endangered by radioactive fallout from the atomic tests. We believe further that it is both undemocratic and un-American to subject one group of citizens to hazards which others are not called upon to face, ... Having with our own eyes seen tragedy strike among us from radiation associated causes, we feel that official recognition of our plight is long overdue. We, therefore, petition that the atomic tests be suspended.\(^{101}\)

In response to this mother's plea, the AEC resorted to its usual justifications. In one letter, Chairman Strauss claimed that the AEC was keeping the fallout from the tests to an absolute minimum. In another, he explained, in a rather condescending and

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callous manner, that the government's decisions regarding nuclear testing were never made lightly. Competent scientists had concluded that the risks from the current rate of nuclear testing were small, "exceedingly small in fact when compared to other risks that we routinely and willingly accept every day."\footnote{Gallagher, \textit{American Ground Zero}, 119.}

In addition to the claims about the "clean" and harmless nature of the American tests, the AEC and other government spokesmen also emphasized their defensive purposes. After the beginning of Operation "Plumbbob" in May, the AEC claimed publicly that a major objective of these tests was to develop nuclear weapons that could be used to defend the U.S. and the rest of the "Free World".\footnote{Minutes and Press Release, January 23, 1957, OCB Central Files Series, WHONSC Staff: Papers, DDEL, Abilene.} According to Strauss, the AEC was developing bombs which had the capability to "defend [U.S. cities] against airborne or missile borne attack without endangering our own people from large amounts of radioactive fallout."\footnote{Draft by Strauss, September 29, 1957, Dulles-Herter Series, AWF, DDEL, Abilene.}

Like the AEC, the president also used rhetoric about the defensive nature of American nuclear weapons when he was attempting to justify the need for tests, both at home and abroad. During one public speech, Eisenhower claimed that "Since 1956 we have developed nuclear explosives with radioactive fallout of less than 4 percent of the fallout of previous large
weapons. This has obvious importance in developing nuclear defenses for use over our own territory.\textsuperscript{105} Like the other members of the administration, however, Eisenhower knew that the main purpose of the American tests was not to make defensive weapons. During one meeting with the president, General Herbert Loper was asked point-blank if the United could legitimately claim that its testing program would result in the development of an anti-missile defense system. In reply, Loper said that "he could not honestly say" that this was an important objective of the tests. According to him, much of the testing was actually more concerned with "better ways of utilizing [nuclear] materials than with developing specific weapons for the defense of the world at large."\textsuperscript{106}

In order to make the arguments in favour of defensive weapons more compelling to the public, the administration, responding to advice from the AEC and the OCB,\textsuperscript{107} also emphasized the threat of a surprise Soviet nuclear attack. During one news conference, the secretary of state told the American people that "we do fear and think we have reason to fear that under certain circumstances, the Soviet Union might attack [with nuclear


\textsuperscript{106} Minutes from the Meeting of the President’s Special Committee on Disarmament Problems, September 24, 1957, Series I, WHOSAD, DDEL, Abilene.

\textsuperscript{107} Briefing Memo by Robert Cutler, April 8, 1957, OCB Central Files Series, WHO,NSC Staff: Papers, DDEL, Abilene.
American children were also exposed to a lot of propaganda about a possible Soviet surprise attack. Jay Truman, who grew up in Utah, recalled that a U.S. general came to his kindergarten class in 1957 to explain to the children that testing was necessary because "the Russians would be here in the morning, that type of thing." The children also watched many government productions such as *Target: Nevada and the Nuclear Tests* and *A is for Atom: B is for Bomb*. In addition, parents were educated about bomb shelters. Mothers in particular were encouraged to take part in "sky watch" programs where they would watch the sky at different times of the day, looking for Russian spy planes. The mothers would be given a roll of dimes and a phone number to call.109

This propaganda was very effective in stimulating public fear about both the Russians and nuclear war. When Gallup asked Americans "How would you rate your feelings towards Russia?" 74 percent responded in the "highly unfavourable" category.110 In response to the question, "If there should be another world war, do you think the H-Bomb will be used against us?" 71 percent

108 Secretary Dulles' News Conference, June 11, 1957, Dulles-Herter Series, AWF, DDEL, Abilene.


answered in the affirmative.\textsuperscript{111} According to Jay Truman, the government's public relations efforts had a powerful impact on public opinion: "when you were constantly informed that those tests were the only things that were standing between you and the Russians in the morning. It was the kind of thing that added to patriotism..."\textsuperscript{112}

Because this public relations campaign was so effective, many Americans believed that an attack from the Soviet Union could happen any day. At the same time, however, it is important to realize that very few in the administration believed that this was likely in 1957. The secretary of state dismissed the idea of a Soviet surprise attack as a "remote" possibility.\textsuperscript{113} In a conversation with Soviet diplomat Andrei Gromyko, Dulles explained that the State Department was more worried about what irresponsible new nuclear powers might do with their weapons than it was about the Soviet Union. He recognized that there was "not much danger that the USSR ... would use their stockpiles of weapons irresponsibly."\textsuperscript{114} CIA intelligence reports supported the State Department's view. Several top secret assessments concluded that a surprise attack was highly unlikely since the

\textsuperscript{111} This poll was taken in April, 1957. George Gallup, ed., \textit{The Gallup Poll: Public Opinion, 1935-1971} (New York, 1972), II: 1489.

\textsuperscript{112} Gallagher, \textit{American Ground Zero}, 311.


\textsuperscript{114} Memo of Conversation between Dulles and Gromyko, October 5, 1957, Dulles-Herter Series, AWF, DDEL, Abilene.
Soviet Union was a historically cautious power, with little interest in this kind of action.\textsuperscript{115} According to one intelligence estimate:

We [the CIA] believe that ... the Soviet planners have concluded that at present the USSR, even if it launched a surprise attack, would receive unacceptable damage in a nuclear exchange with the United States ... These estimates of Soviet military judgements underlie our basic estimate that the USSR will not deliberately ... undertake courses of action gravely risking general war during the period under review [1957-1962].\textsuperscript{116}

Although the administration knew that a bolt from the blue attack from the Soviet Union was extremely unlikely, any rhetoric which emphasized the threat of nuclear war was very useful for public relations purposes. As more and more scientists, geneticists and doctors began to argue that testing could cause leukemia, cancer and birth defects, the administration was forced

\textsuperscript{115} Conclusions like this had been appearing in the CIA's reports since 1954. In one report, the CIA concluded that "we believe it unlikely that the Kremlin will deliberately initiate general war during the period through 1957. We also believe that the Kremlin will try to avoid courses of action which in its judgement would clearly involve substantial risk of general war." In another report, the agency concluded that "the U.S.S.R. will continue to try to avoid substantial risks of general war despite the increase of its nuclear capabilities ... We believe it unlikely that the U.S.S.R. would make open and direct threats of nuclear attack since the Soviet leaders would probably fear that such tactics might bring about a situation in which general war would become unavoidable, and they might even fear that they would provoke a preventive attack by the U.S." See "Likelihood of General War through 1957," SNIE-11-54, February 15, 1954, and "Implications of Growing Nuclear Capabilities for the Communist Bloc and the Free World," NIE 100-5-55, June 14, 1955, both found in Scott A. Koch, ed., \textit{Selected Estimates on the Soviet Union, 1950-59} (Washington, 1993).

increasingly on the defensive. In response to testimony given during special government hearings, the AEC and other government spokespersons began to argue that any "miniscule" hazards from testing had to be "balanced off" by the threat of nuclear war, which of course, could only be started by the Soviet Union. AEC Commissioner Willard Libby testified that the risk of nuclear testing was the price that Americans had to pay for their "material progress." It would be far more dangerous to run the "terrible risk of abandoning the defense effort which is so essential to the survival of the Free World." In a similar vein, Lewis Strauss argued that the risk of testing was very small compared to the "risk of a catastrophe which might result from a surrender of our leadership in nuclear armament." The true danger facing all Americans, he emphasized, was the "infinite devastation that would result from the massive use of nuclear weapons in warfare."

This rhetoric was effective, but only to a certain extent. Although many Americans truly feared that the Soviet Union might start a nuclear war, they concluded that the health problems caused by testing posed the more immediate danger. As Divine has shown, public attitudes towards testing began to change in the spring and summer of 1957. By that time, many prominent

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117 In May 1957, the Joint Committee on Atomic Energy started hearings on radiation which made the public more aware of the health hazards related to testing. See Divine, *Blowing on the Wind*, 129-137.


scientists and doctors, such as Linus Pauling and Albert Schweitzer, had publicized their views about the dangers of testing. When the Gallup poll asked if the United States should cease testing nuclear weapons if all other nations did so, 63 percent said yes. This was a significant shift from 1956 when 56 percent had opposed a test ban.

Perhaps in an effort to counter this shift in public opinion, administration officials became increasingly desperate in their attempts to justify the American position on testing. One tactic was to label the critics of testing as communists. During one press conference, Eisenhower was asked why he and his administration continued to ignore the warnings regarding the health hazards associated with testing. In response to this difficult question, the president charged that "scientists that seem to be out of their own field of competence were getting into

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120 In April, Dr. Albert Schweitzer, a medical humanist, had stated on the radio that every additional nuclear test was a "catastrophe for the human race, a catastrophe that must be prevented." Lawrence Wittner, "Blacklisting Schweitzer," Bulletin of the Atomic Scientists 51(May/June 1995), 56; In May, Dr. E. B. Lewis of Caltech wrote an article for Science magazine claiming that there was no safe level of exposure to radiation. In his view, the risk of leukemia was in direct proportion to the amount of radiation exposure. He predicted a 5 to 10 percent increase in leukemia if strontium-90 levels reached a level that the AEC claimed was harmless. A month later, in the Foreign Policy Bulletin, Linus Pauling estimated that 10,000 persons had already contracted leukemia from testing. He also argued, during an interview for the New York Times, that "a million persons throughout the world would lose five to ten years of life expectancy each if the tests were not stopped." See Miller, Under the Cloud, 257, 302.

this argument, and it looks like almost an organized affair." When the concerned Nevada mother Martha Bardoli wrote her letter of protest to the government in the summer of 1957, she received a similar response from Nevada Senator George Malone, who accused the administration's critics of being communist sympathizers. "It is not impossible", he wrote, "to suppose that some of the 'scare' stories are communist inspired. If they could get us to agree not to use the only weapon with which we could win a war, the conquest of Europe and Asia would be easy."

On July 16, the secretary of state gave a speech on disarmament and testing which was approved by the president. This speech was designed for maximum propaganda effect, emphasizing the "threat" posed by the untrustworthy Soviet Union, and the "clean" and defensive nature of American nuclear weapons. According to Dulles, it was not desirable for the western powers to give up their nuclear weapons since they were unable to match the "masses of manpower" controlled by international Communism. Although it was unrealistic to advocate the elimination of nuclear weapons, the United States might consider an accord to limit tests if such a treaty was linked to a cut-off in weapons production and an effective inspection system. But, the United States could not even consider such an agreement until the Soviets had proven that they were trustworthy. Until that time, American safety depended on having the best weapons, large and

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122 Ambrose, Eisenhower: The President, 398; Excerpts of this news conference are found in Miller, Under the Cloud, 258-259.

123 Quoted in Gallagher, American Ground Zero, 118.
small, that the U.S. could develop. And this, of course, meant continued testing. According to the secretary of state, tests were necessary to make weapons which were cleaner, smaller and more effective as a defense against a surprise attack. Dulles ended this speech with a chilling image:

The whole world faces a grim future if the war threat is not brought under some international control ... If there is to be no end in sight to this kind of peril, man eventually must become less of a surface creature. He must learn to burrow into the earth's crust in the search for protection against the wartime use of nuclear weapons -- blast, heat and radiation. Such measures would add billions of dollars to military defense ...  

This kind of chilling public rhetoric undoubtedly instilled fear in Americans, but it did little to help the negotiations which were dragging along in London. Although the President's Special Assistant on Disarmament continued to negotiate with the hopes of reaching some kind of agreement, his position was consistently undermined by the public statements made by his own government. In addition, Stassen faced further humiliation when the president decided to send the secretary of state to London in late July to take control of the talks.

Before Dulles left on this trip, Eisenhower gave him some advice which was rather cryptic. Since the U.S. was at a propaganda disadvantage because of its stand on testing, the president recommended that Dulles should appear to be flexible on

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124 Dulles' Speech on Disarmament, July 16, 1957, Dulles-Herter Series, AWF, DDEL, Abilene.

125 Ibid.
this issue in London. Since this advice could be interpreted as a shift in the American position, Dulles asked for clarification. Did the president really want him to pursue a more flexible position in London? If this was the case, Dulles pointed out that any fundamental change in the American policy should be carefully reviewed with the Atomic Energy Commission and the Defense Department first. In response, Eisenhower reassured the secretary of state that he was not recommending any change in U.S. policy. Apparently, the president just hoped that Dulles could make it look to the rest of the world like the United States was becoming more flexible, when in fact, it was not.

During his meetings in London with the Soviet representative, Zorin, it became clear that Dulles was not about to make any concessions on the testing issue. When Zorin, an able negotiator, asked him whether the U.S. would consider separating suspension of tests from other disarmament measures, the secretary of state gave him a categorical "no." An agreement to suspend testing, Dulles argued, would not reduce the

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126 Memo from Herter to Dulles, July 26, 1957, Dulles-Herter Series, AWF, DDEL, Abilene.

127 Telegram from the Secretary of State to the Department of State, July 29, 1957, FRUS, 1955-57, XX: 666.


129 The British Foreign Office, described Zorin as "an extremely able negotiator" who was "much smoother and more polished than his predecessor, Gromyko." See Memo from I.T.M. Pink, Foreign Office, to Reilly, July 15, 1957, F0371/129816, PRO, Kew.
likelihood of war. If the Soviets refused to accept a more comprehensive accord, it was better to "go on testing so that the weapons [would] be more adaptable to purely military purposes and less weapons of vast massive destruction." Zorin made no response to this argument. Dulles' rhetoric, combined with the demotion of Stassen, led the Soviets to believe that the Americans were just marking time in the Subcommittee.

American recalcitrance in these talks was partly due to the fact that the AEC and DOD were planning a new series of tests for 1958. In August, Lewis Strauss informed the president that the next series of Pacific tests, code-named "Hardtack", was scheduled to begin the following April at the Eniwetok Proving Grounds. This series was considered crucial to the development of "clean" nuclear weapons which could be used for "defense or other tactical uses." Given the state of international relations with regards to testing, Strauss stressed the importance of going ahead with this series as soon as possible.

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132 Letter to the President from Lewis Strauss, August 2, 1957, Administration Series, Folder: "AEC 1957(2)," AWF, DDEL, Abilene.

133 Letter to the President from Lewis Strauss, August 2, 1957, Subject Series, Folder: "AEC, vol II (1)," WHOSS, DDEL, Abilene.
Although he ultimately approved the AEC’s plans, the president had some reservations about the new series. During a meeting with his advisors, Eisenhower voiced concern about the number of tests and the duration of "Hardtack." In his view, twenty-five tests was a little excessive. How had the AEC and the DOD arrived at this number? Strauss explained that this number had been arrived at "arbitrarily." The AEC had two labs, each of which had requested twenty shots, and the DOD had also requested ten shots. Since Strauss thought that fifty shots were too many, he had simply cut the number in half.\(^{134}\) Although the president did not query the AEC chairman any further about this arbitrary manner of decision-making, he did raise some important questions about the political implications of this long test series, which was expected to last from May through August. The main dilemma in conducting tests of this magnitude in 1958, as the president saw it, lay in planning and carrying out extensive tests on the one hand, while professing an interest to suspend testing in a disarmament agreement on the other. Eisenhower worried that this "paradoxical conduct" was bound to have a negative impact on world opinion.\(^{135}\)

Of course, Strauss was not overly concerned about the political ramifications of "Hardtack." He explained to the president that the duration and the timing of the series could

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\(^{134}\) Memo of Conversation with the President, August 9, 1957, "AEC, Vol II (1)", Subject Series, WHOSS, DDEL, Abilene. A sanitized version of this memo is found in FRUS, 1955-57, XX: 699-701.

\(^{135}\) Ibid.
not be altered since each experiment had already been carefully
scheduled according to meteorological conditions.\textsuperscript{136} Despite his
doubts, the president acquiesced, as usual, to the desires of the
AEC Chairman. On the grounds that planning for the series was so
far advanced, he gave his approval to the AEC's plans.\textsuperscript{137}

Thus, even though the president was aware of the problems
related to the American position on testing, he did not have the
political will to alter the course of events. Filled with doubts
about the political wisdom of going ahead with the extensive
testing program planned by the AEC, he nevertheless gave his
approval. At times, during the summer of 1957, Eisenhower
himself seemed to recognize that he was losing control of the
policymaking process. During one conversation with the Acting
Secretary of State, Christian Herter, he commented that he was
disturbed that the nuclear scientists "seemed to be running the
government rather than acting as servants of the government."\textsuperscript{138}
At another meeting, he conveyed a similar sentiment, stating that
"our statecraft was becoming too much a prisoner of our
scientists."\textsuperscript{139} However, it was not just the scientists who were
driving forward the American testing program. It was also the
bureaucracies who hired the scientists, the Department of Defense

\textsuperscript{136} Ibid.

\textsuperscript{137} Phone Message to Secretary Dulles from President

\textsuperscript{138} Memo of a conversation between the President and the

\textsuperscript{139} Minutes of Conversation with the President, August 9,
1957, Subject Series, WHOSANSA, DDEL, Abilene.
and the Atomic Energy Commission, and the bureaucrats, such as Strauss, who dominated policy on testing within the administration. Although the president and the secretary of state had serious concerns about the political ramifications of the next test series, they were swayed by the arguments made by the defense bureaucracies.

On September 12, the Atomic Energy Commission and the Department of Defense released a joint statement, approved by the president, announcing their plans for "Hardtack". This announcement was designed to achieve the maximum propaganda effect:

The U.S. had repeatedly stated its willingness to suspend nuclear tests as part of a disarmament agreement. Until such an agreement was attained, the continued development of nuclear weapons was essential to the defense of the U.S. and of the Free World ... Information on the effects of these weapons would be obtained for military and civilian defense purposes ... An important objective of the tests would be the further development of nuclear weapons with greatly reduced radioactive fallout so that the radiation hazard might be restricted to military targets.140

As the administration embraced the AEC's plans for testing more "clean" and "defensive" nuclear weapons, it became increasingly obvious that Stassen no longer had any real influence as the President's Special Assistant for Disarmament. Aware that he no longer had much support in the administration, Stassen decided to make another plea for an agreement on testing. According to some historians, Stassen's persistence in this

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140 Joint AEC and DOD Statement, September 12, 1957, Administration Series, Folder: "AEC 1957(2)," AWF, DDEL, Abilene.
matter was related to his personal political ambitions.  

However, even though Stassen's attempt to reach an accord might have been affected by domestic political considerations, it was also influenced by his experience negotiating with the other powers, particularly the Soviet Union. His arguments in favour of a test ban were based on his insight that the international political climate was favourable to an agreement. Japan and India continued to call for an end to testing as did West Germany and Yugoslavia. France had indicated that it would forgo its own nuclear program if the other powers agreed to halt


142 Hewlett and Holl, Atoms for Peace and War, 384.

143 Japan sent many messages to the State Department asking the US to suspend its tests in Nevada and its plans for tests in 1958 in the Pacific. It also tried, unsuccessfully, to get the US to pay compensation for the damage caused by the American testing program to the Japanese fishing industry in 1956. See, for example, Memo from Mr. Pender, Legal Advisor to the Department of State, February 7, 1957, 711.5611/2-757; Memo of Conversation, Department of State, April 29, 1957, 711.5611/4-2957; Telegram from Tokyo to Secretary of State, May 2, 1957, 711.5611/5-257; Telegram from Tokyo to the Secretary of State, September 17, 1957, 711.5611/9-1757; all of these documents are found in DSRG 59, NA, Washington.

144 Chancellor Adenauer made this proposal on May 10; the Government of Yugoslavia passed its resolution on June 18. See Letter from British Embassy in Belgrade to the Foreign Office, June 21, 1957, F0371/129826, PRO, Kew.
testing.\textsuperscript{145} Anti-test sentiment continued to swell in Britain and there was a chance that Macmillan would accept a suspension of tests as a "first step" towards a more comprehensive agreement.\textsuperscript{146} Even more important, however, the Soviet concessions regarding overflights and inspections indicated a genuine willingness to reach some kind of agreement on the testing issue. Given all of the political momentum in favor of an accord, Stassen urged the president to seize this historic moment and support a proposal to suspend testing for twenty-four months, beginning September 1, 1958.\textsuperscript{147} If such an agreement was not reached, new nuclear powers would soon begin testing their own weapons, and the situation would be "beyond control."\textsuperscript{148}

All of Eisenhower's advisors recommended that he reject Stassen's proposal. Speaking for the DOD and the AEC, Donald Quarles contended that Stassen's anxieties about proliferation

\textsuperscript{145} Becoming impatient with the American position, the French began to favour an agreement which would require the other powers to cease testing and halt the production of nuclear weapons. See Memo from I.T.M Pink, Foreign Office, to Reilly, July 15, 1957, FO371/129816, PRO, Kew; and Statement by the French Representative (Moch) to the Disannament Subcommittee: Control of Nuclear Production, Document 210, Prepared by the Department of State, July 5, 1957, Documents on Disannament, 1945-59, II: 803-812.

\textsuperscript{146} Even Secretary Dulles admitted that this was a possibility. In one message, he reported to the president his concern that the "UK might acquiesce in a UN [test] suspense resolution." See Telegram from Dulles to Eisenhower and Strauss, July 30, 1957, Dulles-Herter Series, AWF, DDEL, Abilene.

\textsuperscript{147} Memo to the Secretary of State from Harold E. Stassen, September 23, 1957, Administration Series, "Disannament Talks," AWF, DDEL, Abilene.

\textsuperscript{148} Ibid. See also Memo of a Conversation, White House, October 8, 1957, FRUS, 1955-57, XX: 739.
were unfounded. It would be more dangerous, in his view, to reach an agreement on testing since this might serve as a dangerous precedent leading towards other arms control measures. Curiously, given his concerns about world opinion and proliferation, the secretary of state also rejected Stassen's proposal, calling it a "complete abandonment of our position."

Conceding that a suspension of testing might give the world a better sense of security, he argued that an agreement was not in the national interest since it would "end our development of clean weapons." According to Dulles, the United States should not feel pressured by international opinion, since it tended to be highly "emotional" in nature. Instead, the United States should pay closer attention to the "lessons of the past."

Probably alluding to the interwar years, Dulles warned that the "record of the past" proved that "imprudent disarmament measures" could lead to greater insecurity and even war. Accepting the opinions of his closest advisors, the president rebuffed Stassen's proposal.

Given the administration's position on testing in particular and disarmament in general, it was forseeable that the UN

149 Memo to Secretary Dulles from Donald Quarles, September 30, 1957, Subject Series, Folder: "Disarmament II (5)", WOSS, DDEL, Abilene.

150 Memo from Secretary Dulles to Stassen, September 27, 1957 and Letter from Secretary Dulles to Eisenhower, September 29, 1957, both found in Administration Series, Folder: "Disarmament Talks," AWF, DDEL, Abilene.

Subcommittee on Disarmament would make no progress on these issues. In his memoirs, the president paints a favourable image of the American role in the negotiations, recalling that the United States made "major concessions" in the Subcommittee, including a proposal for a two year moratorium agreement on nuclear testing. Like most memoirs, however, Eisenhower's leaves out some important information. The reality was that his government obstructed the negotiating process by linking an agreement on testing to other disarmament measures. In late August, the American administration dealt a final blow to the talks when it linked an agreement on testing to a "package deal". According to this proposal, the United States would cease testing for one year (perhaps two) if the Russians agreed to halt the production of nuclear weapons, reduce their conventional arms, set up a control system including vast aerial and ground inspection zones, and plan for the peaceful use of outer space missiles (this last condition was one that Eisenhower was particularly enthusiastic about). Given all of these conditions, the State Department knew this proposal had no hope of success. It realized that artificially linking a test ban to all of these other disarmament measures reduced the possibility of an agreement to zero. The proposal was more of a public relations gesture than anything else: it was a good way to blame the collapse of the negotiations on the Soviet Union. As Joseph

152 Eisenhower, Waging the Peace, 474.

Levitt explains, "the cut-off became a propaganda device to blame the Soviet Union and allow the United States to escape the political penalty of pursuing its testing program."¹⁵⁴ Recognizing the proposal for what it was, the Soviets rejected it outright, and the Subcommittee adjourned in late September.¹⁵⁵

On October 4, 1957, the dramatic Soviet launch of the satellite Sputnik made the United States even more firmly committed to its testing program. Unlike the American public, Eisenhower was not alarmed by the Soviet achievement because he had access to intelligence which led him to conclude that the satellite did not represent a threat to U.S. national security. Back in June of 1956, Eisenhower had approved the decision to send U-2s, high-altitude spy planes, over the Soviet Union. These planes brought back regular reports on Soviet missile and satellite developments with pictures "clear enough to make a newspaper headline legible." From these spy flights, the president had learned a lot about the first Soviet ICBM tests as soon as they occurred (in the summer of 1957) and he had also received advance warning about Sputnik. In addition, Eisenhower was aware that the American satellite program was already well established and the missile program proceeding on schedule, as a result of decisions he made in 1955.

¹⁵⁴ Levitt, Pearson and Canada's Role in Nuclear Disarmament, 263.

The American people were not privy to this classified information, however, and Sputnik intensified their fear about a surprise attack from the Soviet Union. To alleviate the growing sense of alarm, the secretary of state recommended that Eisenhower disclose some of the intelligence information to the American public. The president chose not to take Dulles' advice, however, because he feared that such a disclosure might be politically embarrassing and also jeopardize the U-2 program, which provided important information about the U.S.S.R.

In Divine's view, "the passage of time has confirmed the wisdom of the president's response to Sputnik." In order to keep U.S. intelligence activities secret, Eisenhower refused to react in a panicky manner. He was willing to accept considerable criticism from the press and the Democrats in order to protect the U-2 program. As Divine concedes, this response also had heavy political and economic costs. Unwilling to provide the public with evidence that the U.S. was not far behind the U.S.S.R. in satellite and missile development, the president failed to reassure his "badly shaken nation." As a result of this political failure, Eisenhower became even more vulnerable to pressures from the defense bureaucracies. Admitting that he felt "helpless" in the face of their demands, the president approved decisions to increase the defense budget, expand the missile

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program, and test more nuclear weapons. Thus, as Divine asserts, "despite his own better judgement," Eisenhower was "forced to preside over a massive arms buildup that far transcended any possible Soviet threat." 

Some historians, such as Hewlett and Holl, and also Divine, suggest that, prior to Sputnik, there had been some change in the administration's approach to the testing issue. Divine entitles his chapter on 1957 the "Magic Moment" and Hewlett and Holl conclude that the "gap between [East and West] on the test-ban issue had been narrowed" during the year. This perspective is partially true since the Soviet Union did make some major concessions in order to get an agreement on testing in 1957. However, the Eisenhower administration remained quite stubborn in its approach. With the exception of Stassen, no one in the administration seriously advocated a significant shift in the position of the United States. Although these historians believe that Eisenhower and Secretary Dulles moved closer to Stassen's position, there is not much evidence to support this

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157 Eisenhower also agreed to establish the President's Advisory Committee headed by a full-time scientific advisor to the White House. James Killian was the first scientist appointed to this post. See Divine, Blowing on the Wind, 170-1.


159 Hewlett and Holl, Atoms for Peace and War, 462; Divine, Blowing on the Wind, 143.

160 See, for example, Divine, Blowing on the Wind, 143, 146-7, 178; Hewlett and Holl, Atoms for Peace and War, 469; Ambrose, Eisenhower, 403.
conclusion. The president and the secretary of state occasionally vocalized concerns about the political ramifications of the American position on testing, but they never translated these concerns into productive policies or actions. Sharing the same perspective as the defence bureaucracies, the president was unwilling to deviate significantly from the policies established by the Department of Defence and the Atomic Energy Commission. Instead of supporting the Special Assistant for Disarmament in his efforts to reach an agreement in London, Eisenhower made statements about the American testing program which misled the public, undermined Stassen, and made any progress in the disarmament talks impossible.

By the end of the year, the American policy on testing remained much the same as it had been since 1954. As international agitation in favour of an agreement grew, Eisenhower and Dulles continued to reject the proposals made by other governments. In October, Japanese Prime Minister Nobusuke Kishi again called for an end to nuclear testing. In late November, Indian Prime Minister Nehru made a similar appeal. On December 10, Nikita Khrushchev instructed Bulganin to send a new proposal to Eisenhower asking the United States and Britain to join the Soviet Union in a two-to-three year test moratorium, beginning January 1, 1958.161

161 Message From the Japanese Prime Minister to President Eisenhower Regarding Nuclear Weapons Tests, Document 224, September 24, 1957; Indian Draft Resolution Introduced in the First Committee of the General Assembly: Suspension of Nuclear Weapons Tests, Document 229, November 1, 1957; Statement by the Indian Prime Minister on Nuclear Test Explosions, Document 236,
Despite the claims in his memoir that he was committed to the idea of a test ban by this time, the president's responses to the other countries indicated that no real change had occurred in the American policy. Instead of showing any flexibility on the issue, Eisenhower resorted to the standard arguments to justify the continuation of the American testing program. To the Japanese Prime Minister, Eisenhower explained that the security of the United States and the "Free World" depended on the testing of nuclear weapons. He also claimed, disingenuously, that the United States was on the verge of perfecting "clean" nuclear weapons, as well as important defensive nuclear weapons, particularly against missiles, submarines, and aircraft. The public's preoccupation with the health hazards of testing was unfounded whereas the danger of a surprise nuclear attack was too great to ignore. Therefore, the United States would not accept an agreement to stop testing until the Russians agreed to all of the other disarmament measures. Similar replies were sent to

November 28, 1957; Letter from the Soviet Premier to the President, Document 237, December 10, 1957; all documents prepared by the Department of State and found in Documents on Disarmament, 1945-59, II: 88, 906-7, 917-26.

162 As Divine points out, Eisenhower's problems at this time were compounded by the fact that he had suffered a slight stroke two weeks prior to the Soviet proposal. See Divine, Blowing on the Wind, 175.


164 As stated in the proposal put forward in late August, these measures included complete air and ground inspection of the Soviet Union, a reduction of present stocks of nuclear weapons, a cut-off of further production of nuclear weapons, a reduction of
India and the Soviet Union.  All three countries found the American position unsatisfactory, however.

armed forces and an agreement on outer space control. See the Statement by the United States Representative (Lodge) to the First Committee of the General Assembly, Document 227, Prepared by the Department of State, October 10, 1957, Documents on Disarmament, 1945-59, II: 893-903.

At the beginning of 1958, the American position on testing remained the same as it had been the previous year. In keeping with the declaration made in August of 1957, the United States refused to consider an agreement to suspend tests unless it was linked to other disarmament measures, like the cut-off of all nuclear weapons manufacture. Some historians, such as Robert Divine, Richard Hewlett, Jack Holl, and Charles Appleby, argue that the Eisenhower administration reversed its position on testing in 1958. According to them, the shift resulted from a combination of domestic and international factors, the most important one being the president's deep personal commitment to a test ban.\(^1\) A closer examination of the official policy, reveals, however, that very little changed.

In the spring of 1958, the U.S. was forced to reconsider its position after the U.S.S.R. scored a major propaganda coup on March 31 by announcing a moratorium on its tests. As a result of the dramatic Soviet move, the State Department advised the

president to shift the American stance. Becoming increasingly concerned about international public opinion, the secretary of state recommended that the United States become more flexible in order to reach an agreement on testing. In the fall of 1958, conclusions reached by the Geneva Conference of Experts, combined with new shifts in the British position, gave the State Department's recommendations more force. As a result of these developments, the American government did stop testing temporarily before meeting with the other nuclear powers to discuss the possibility of reaching a permanent accord. However, it is important to realize that this temporary moratorium did not entail any significant shift in the fundamental U.S. position on testing -- i.e., the Americans continued to link an accord on testing with the establishment of a foolproof control system and progress in other disarmament measures. During the negotiations, which began in Geneva on October 31, very little was accomplished. As before, the Atomic Energy Commission and the Department of Defense opposed any political agreement which might curtail their weapons programs. Although the secretary of state and the American delegates in Geneva repeatedly advocated a change in the U.S. position, they met persistent opposition within the administration. The president, of course, had the authority to shift the American policy on testing, but he chose not to do so. Supported by a domestic political climate which was opposed to a halt in testing, Eisenhower decided not to take any stand which might adversely affect the American nuclear weapons program.
In January of 1958, Harold Stassen made one last valiant effort to get the administration to revise its policy. Based on his view that the Soviet Union and most of the "Free World" countries would welcome an accord, he recommended that the U.S. propose a twenty-four month suspension of testing, if the Russians agreed to establish ten inspection stations within their borders. If such a proposal was accepted, he argued, it would not only improve relations between the two countries, it would also open up the Soviet Union, an objective consistently pursued by the Defense Department.  

Predictably, the DOD, JCS and the AEC rejected Stassen's proposal. Representing the viewpoint of these agencies during a meeting of the National Security Council, Chairman Strauss contended that any proposal to suspend testing would have severe repercussions on the American nuclear programs. In particular, it would affect the development of "peaceful uses" of hydrogen explosions and "clean" nuclear weapons. Based on the assumption that the Soviets would cheat on any agreement and conduct clandestine tests, Strauss believed that a control system would require scores of inspection stations inside the Soviet Union. Noting the differences between Stassen and Strauss, the president concluded that the AEC chairman had the stronger case. Although

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2 According to this proposal, the United States would be expected to set up an equal number of inspection posts within its borders.

3 Minutes of the 350th Meeting of the NSC, January 6, 1957, NSC Series, AWF, DDEL, Abilene.
he felt that "we must keep the hope of disarmament before the world," Eisenhower found himself more in agreement with the defense bureaucracies than with his disarmament advisor. In his view, "this was not the time to make any new proposals."

The chief executive's rejection of Stassen's proposal coincided with the end of his tenure as the president's special assistant. Commenting on Stassen's differences with the secretary of state, Eisenhower informed Dulles that unless "Stassen could find some concrete administrative job where he was not in the broad consulting business as assistant to the president, he should quit." During a meeting with Stassen on February 7, Eisenhower asked him to resign as disarmament advisor, giving him the option of accepting another position in the administration or leaving "by the end of the month." Stassen decided on the latter, announcing that he was leaving the White House to enter the governor's race in Pennsylvania. A week later, Eisenhower appointed James Wadsworth, the deputy

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4 Ibid. Stassen outlined his position in a letter to the president, January 14, 1958, Administration Series, AWF, DDEL. Similarly, Strauss had a meeting with the president, during which he emphasized the possibility of "cannibalizing existing weapons to provide fissionable material for power and other peaceful purposes." See Minutes of Meeting with the President, January 22, 1958, Subject Series, Alphabetical Subseries, WHOSS, DDEL, Abilene.

5 Telephone call from the President to Secretary Dulles, February 7, 1958, Telephone Calls Series, White House Calls Subseries, John Foster Dulles Papers, DDEL, Abilene.

6 Telephone call from the President to the Secretary of State, February 7, 1958, Diary Series, AWF, DDEL, Abilene.

ambassador to the UN, to take over Stassen's duties as the American representative in any future disarmament negotiations. While Wadsworth would participate in formulating policy, he remained under the control of the State Department and did not serve as the President's Special Disarmament Advisor.\(^8\)

According to Divine, Eisenhower had "moved far toward acceptance of [Stassen's] views" by the time he asked him to resign from his position as disarmament advisor. Indeed, Divine even speculates that "one likely reason for his removal in early 1958 was to make a shift to a more flexible policy feasible ... [W]ith Stassen gone, it would be far easier to negotiate seriously with the Russians for a test ban agreement."\(^9\) A closer analysis of the president's position on testing in 1958 undermines this argument, however. There is very little evidence to support the view that Eisenhower advocated any change in the U.S. position on testing during 1958. Shortly after Stassen was forced out, Secretary Dulles became much more flexible regarding the American policy, but he was not supported by the president. Rather than accept a fundamental change in the American position, Eisenhower continued to back the arguments made by those opposed to an agreement on testing, even when this caused political problems with countries closely aligned with the U.S. such as Japan and Britain.

\(^8\) James Wadsworth had served as the Deputy UN Delegate under Henry Cabot Lodge since the beginning of the Eisenhower administration. See Divine, *Blowing on the Wind*, 178, 235.

On February 14, American relations with Japan became more strained over the testing issue when the U.S. announced that it was designating a large area of the Pacific as a danger zone, in order to carry out the "Hardtack" series at the Eniwetok Proving Grounds. Shortly after this announcement, the representative at the Japanese Embassy, Minister Takeso Shimoda, delivered a protest note to the State Department, conveying his government's deep regret that the United States was proceeding with the tests, despite consistent Japanese appeals. In particular, his government was very concerned that the danger zone lay near Japanese fishing areas and ship routes. If any Japanese lives or property were lost because of these tests, the government expected full compensation from the United States.

It was important for the Japanese Embassy to convey this message because of the widespread opposition to testing back home. Since the Fukuryu Maru incident in 1954, the Japanese press had been overwhelmingly against the American tests. On February 26, the Asahi published an article, attributed to the Japanese Fisheries Agency, explaining that the danger zone was in one of the best areas for tuna and bonito fishing. At least four hundred fishing boats usually operated in the zone, and most of

10 According to the announcement, this danger area included 390,000 nautical miles surrounding the Eniwetok Proving Ground. This area was similar in size to the "Redwing" Series but its east and west boundaries were shifted about 120 nautical miles to the west. The series was scheduled to begin April 12. See Memo from the AEC to Secretary Dulles, March 12, DSRG 59, 711.5611/3-1258, NA, Washington.

these would be affected by the American tests. Since "Hardtack" was expected to last for five months, the Japanese fishing industry was expecting heavy losses.12

According to the American Embassy in Tokyo, the Japanese public shared the press reaction to the tests. In fact, recent opinion polls had revealed the "virtual unanimity of the grassroots opposition to these tests." One nationwide survey, carried out by the Asahi Shimbun the previous summer, indicated that 89 percent of the population believed that nuclear testing should be banned forever.13

Along with the Japanese, the Russians stepped up their pressure on the United States. In March, the Soviet government began sending a barrage of letters to the American president, asking him to consider a summit meeting in the near future. At the time, Khrushchev's conciliatory attitude towards the U.S. appeared to be motivated by a desire to reduce military expenditures and to resolve differences between East and West over issues such as the Middle East, Berlin, and the expansion of nuclear weapons bases.14 In many of the messages, the U.S.S.R.

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12 Telegram from Embassy in Tokyo to Department of State, February 26, 1958, DSRG 59, 711.5611/2-2658, NA, Washington. As before, the Japanese Seamen's Union sent its own message of protest to the U.S. See Letter from the Union to President Eisenhower, February 18, 1958, DSRG 59, 711.5611/3-758, NA, Washington.


emphasized how American military encirclement was contributing to Soviet insecurity. The Russians were increasingly apprehensive about the American decisions to send IRBMS and nuclear-capable SAC aircraft to bases near the Soviet borders -- in Turkey, Japan, England, France, Italy, West Germany, Greenland and the Arctic.\textsuperscript{15} Khrushchev hoped that a summit comprised of the three nuclear powers might result in a relaxation of tensions caused by the nuclear arms race. More specifically, he asked leaders from the United States, Great Britain, and the Soviet Union to reconsider an agreement to cease the testing of nuclear weapons.\textsuperscript{16}

\begin{quotation}
1988), 149-50.
\end{quotation}

\textsuperscript{15} In late 1957, NATO commanders had agreed to a formula for the deployment of nuclear warheads in the NATO command. The missiles were to be distributed among the various national armies, but the nuclear warheads were kept under American control. See Morris, \textit{Iron Destinies}, 151.

\textsuperscript{16} Letter from Chairman Bulganin to Eisenhower, March 3, 1958, International Series, AWF, DDEL, Abilene; Memo from the Chief of Naval Operations for the JCS, March 24, 1958, JCSRG 218, NA; A Report by the Joint Intelligence Committee on "Soviet Reaction to U.S. Deployment of Intermediate Range Ballistic Missiles," April 1, 1958, JCSRG 218, 1924/102, NA; Minutes of NSC Meeting, April 21, 1958, DSRG 59, 711.5611/4-2258, NA, Washington; Letter from Khrushchev to Eisenhower, April 22, 1958, International Series, AWF, DDEL; Telegram from Embassy in New Zealand to the State Department, May 8, 1958, DSRG 59, 711.5611/5-258, NA, Washington; State Department Summary of Letter from Khrushchev to Eisenhower, May 9, 1958, International Series, WHOSS, DDEL; Letter from Khrushchev to Eisenhower, June 11, 1958, International Series, AWF, DDEL, Abilene. Among other things, the Soviets were concerned about the possibility that the SAC aircraft would crash while carrying nuclear bombs. According to a disclosure by the Danish government, an American B-52 loaded with four nuclear bombs crashed over Greenland in late 1957. At the time, teams of U.S. and Danish workers helped "clear away tons of contaminated snow." See "U.S. Allowed to Deploy Nuclear Arms, Danes Say: PM Made Secret Pact in 1957," \textit{Toronto Globe and Mail} (June 30, 1995): A17.
Eisenhower was not interested in attending a summit to discuss these matters, however.\textsuperscript{17} When the British prime minister conveyed an interest in such a conference, the president told Secretary Dulles that he did "not care what the British think on this! We are not going to be hoodwinked into a meeting."\textsuperscript{18}

Instead of responding directly to the Soviet proposal, Eisenhower decided to make a "public relations" gesture. In order to improve the image of the United States, Eisenhower thought it would be a good idea to invite several thousand Russian students to study in the United States. In his view, this might help persuade the world that the U.S. really was a peaceful nation. Not too impressed with the president's idea,\textsuperscript{19} the secretary of state suggested that a more serious proposal was in order. Although Dulles had supported the administration's position on testing (and the decision to expel Stassen), he was becoming very worried about the American reputation in the world.\textsuperscript{20} This anxiety increased considerably when the State

\textsuperscript{17} Letter to Secretary Dulles from Eisenhower, March 7, 1958, Diary Series, AWF, DDEL, Abilene.

\textsuperscript{18} Telephone Call from Secretary Dulles to the President, March 4, 1958, Telephone Calls Series, White House Telephone Calls Subseries, John Foster Dulles Papers, DDEL, Abilene.

\textsuperscript{19} Letter from Eisenhower to Dulles, March 21, 1958, Diary Series, AWF, DDEL, Abilene.

\textsuperscript{20} Several overseas polls conducted by the United States Information Agency showed that Eisenhower's image as a leader for peace had deteriorated significantly as a result of the American position on testing and disarmament. See Record of Telephone Call from Under Secretary of State to General C.D Jackson, February 13, 1958, Series III, Christian A. Herter Papers, DDEL,
Department received intelligence reports that the Soviets were preparing to announce a unilateral suspension of testing. During a meeting with the president and his advisors in late March, Dulles explained that the government would be in an extremely uncomfortable political predicament internationally if the Soviet Union went ahead with a moratorium while the United States proceeded with "Hardtack." He reminded the administration that "for the last two and a half years we have been losing the ... confidence of the Free World as the champion of peace." Because he felt that it was "desperately" important for the United States to make a positive gesture, he recommended that Eisenhower make an immediate announcement that no further tests would be held during his term in office after "Hardtack" ended.21

The secretary of state had sound political reasons for making this recommendation but he faced vehement opposition from the defense bureaucracies. The JCS and the DOD recommended that the U.S. should maintain its position and not consider a proposal to suspend testing unless it was linked to general disarmament. Any agreement with the Soviet Union would be dangerous, they contended, because the Russians would undoubtedly carry out "clandestine" nuclear testing. Further American tests would foster the development of an anti-ICBM system, deterrent warheads and tactical nuclear weapons, all of which would help protect the United States against the Soviets, who "would always have the

21 Minutes of Meeting, March 24, 1958, Diary Series, AWF, DDEL, Abilene.
initiative in starting a war." Indeed, the U.S. should not consider any agreement on testing until it had acquired a "complete spectrum of [nuclear] weapons" which would make it possible to apply "selectively adequate force against any threat."22

The AEC Chairman, who was equally suspicious about Soviet intentions, suggested that the Russians had succeeded in putting the United States in a "false position" regarding their testing program. American tests did "not result in any significant health hazards," according to Strauss. The real hazard was not testing but the possibility that the Soviets would initiate a nuclear war. Because of this threat, the upcoming "Hardtack" series was designed to help protect the United States from a nuclear attack by providing "clean" nuclear weapons that could be used for "defense against airborne and missile borne attack upon our cites."23

Secretary Dulles was unpersuaded by these arguments in favour of continued testing. Since 1957, scientists and others had raised questions which cast doubts on the self-proclaimed objectives of the American test program to develop "clean" and defensive weapons. In addition, CIA intelligence reports

22 Ibid; See also Memos from the JCS to the Secretary of Defense, March 13 and March 21, 1958, NSC Series, Briefing Notes Subseries, WHOSSANSA, DDEL; Memo from the JCS to the Secretary of Defense, April 30, 1958, Subject Series, Department of Defense Subseries, WHOSS, DDEL, Abilene.

23 Memo from Strauss to the President, May 8, 1958, Administration Series, AWF, DDEL; Memo of Conversation with the President, May 14, 1958, Subject Series, Alphabetical Subseries, WHOSS, DDEL, Abilene.
continued to argue that the Soviet Union would not initiate a nuclear war with the United States in the foreseeable future. As recently as March 12, a report by the Joint Intelligence Committee to the JCS had concluded that the Soviets would not "resort to actions which in their judgement would seriously incur the risk of general war."²⁴

Frustrated with the unconvincing arguments presented by the DOD and AEC regarding both the Soviet threat and the objectives of the testing program, the secretary of state reminded them that the American government was already losing the struggle for world opinion, which increasingly viewed the United States as a "militaristic" and "bellicose" nation. In his view, the U.S. was open to the charge of insincerity with regards to its position on testing. By insisting on linking a test suspension with other disarmament measures, the U.S. had placed "impossible conditions" on the achievement of an agreement. The administration knew that the Soviet Union would never accept the proposal put forward by the U.S. in August of 1957 and that even if it did, the United

²⁴ Report by the Joint Intelligence Committee to the JCS, March 12, 1958, JCSRG 218, 1924/101, NA. In early April, the same group concluded that "Our current estimate is that the U.S.S.R. considers general war as both an undesirable and prohibitive course of action throughout the period" from 1958-62. See Report by the Joint Intelligence Committee on "Probable Soviet Reactions to U.S. Deployment of IRBMs in Western Europe," April 1, 1958, JCSRG 218, 1924/102, NA. A later report written by the U.S. Air Force Chief of Staff contained similar conclusions, arguing emphatically that it was extremely unlikely that the Soviets would be the aggressors even in a limited or local conflict, given that "neither logic nor prudence on the part of the Soviet leaders would induce them to conclude that ... such action is, in fact, the appropriate or necessary means to their ends...." See Memo from the Chief of Staff, Air Force, to the JCS, August 21, 1958, JCSRG 218, 471.6, NA, Washington.
States would "never, in fact, agree to give up [its] weapons."25

Unfortunately for Dulles, his pleas fell on deaf ears. Although the president indicated concern about the deteriorating reputation of the U.S. in the world, he also worried that an accord with the Soviets might lead some to charge that "this is our Munich." Given the lack of support for his proposal in the administration, the secretary of state suggested that the United States should at least refrain from making any further public declarations about the "clean" and "peaceful" nature of its tests since these claims lacked credibility. He also warned his colleagues that maintaining the status quo meant that "we are going to get licked."26

Not heeding the warning of his chief foreign policy advisor, Eisenhower decided instead to take the advice of the AEC and OCB. Rather than make any commitment to limit the American program, these agencies recommended that the president approve an additional six megaton nuclear detonation during "Hardtack." The purpose of this test was to gain a propaganda advantage. Representatives from the press and scientific communities would be invited to watch this explosion, which would supposedly demonstrate the progress made by the U.S. in developing nuclear

25 Minutes of Meeting, March 24, 1958, Diary Series, AWF, DDEL, Abilene.

26 Ibid; See also Telegram from Eisenhower to Prime Minister Macmillan, March 28, 1958, International Series, AWF, DDEL, Abilene.
weapons with substantially reduced fallout. Approving this test, the president decided to make a press statement, also recommended by the OCB and AEC, emphasizing the "clean" and "peaceful" objectives of the American nuclear testing program.

Although Eisenhower decided to follow the AEC's suggestions, the State Department (and the United States Information Agency) had serious reservations about taking this course of action. Dulles was particularly concerned about placing the emphasis on the "peaceful uses" of American nuclear tests. As he pointed out, this was misleading since the "Hardtack" series was in fact "devoted to the development and refinement of weapons." Any attempt to make it appear otherwise, he argued, "would appear transparent." The State Department also believed that the administration would come to regret making claims about American progress in the development of "clean" nuclear weapons. Ostensibly, the purpose of the additional test was "to demonstrate that we can do this and get the president off the hook," but Under Secretary of State Christian Herter worried that "instead, we may end up proving he was wrong."

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27 Letter from Robert Cutler to the President, March 24, 1958, Administration Series, AWF, DDEL, Abilene.

28 Telegram from Secretary Dulles to the U.S. Delegation at the UN, New York, March 22, 1958, DSRG 59, 711.5611/3-2258, NA. Dulles' argument was supported by a JCS report which emphasized the importance of developing "surface-burst atomic weapons" whose primary effect was "radiological fallout damage." See "Operational Implications of Use of Surface-Burst Nuclear Weapons," 1958, JCSRG 218, 471.6, NA, Washington.

29 Handwritten note at the bottom of a memo from the Acting Director of the USIA to Christian Herter, Under Secretary of State, March 25, 1958, DSR 59, 711.5611/3-2558, NA, Washington.
Eisenhower himself should have been concerned about the AEC's strategy. Two days before the president made the press statement suggested by the agency, his National Security Advisor, General Robert Cutler, sent him a letter examining the pros and cons of the AEC's position. Cutler agreed with the president that the potentially beneficial propaganda impact of the announcement overrode any doubts which might arise from certain "facts." Scientists working within the nuclear weapons program knew, for example, that it was extremely difficult, if not impossible, to produce a nuclear bomb with significantly reduced fallout. They also knew that the radioactive fallout from the proposed six megaton "clean" bomb test during "Hardtack" would be very "dirty." Indeed, they predicted that the fallout from this explosion would be about equal to that of the Hiroshima bomb.\(^{30}\)

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\(^{30}\) Letter from General Robert Cutler to the President, March 25, 1958, Administration Series, AWF, DDEL, Abilene. Hans Bethe (President's Science Advisory Committee), Harold Brown (Lawrence Livermore Laboratory), and Carson Mark (AEC Los Alamos Laboratory) were three of the prominent scientists who were very skeptical about the possibility of designing a "clean" nuclear weapon. In one memo Bethe wrote that "It has been stated publicly that it would be possible to develop completely clean weapons in the course of five years of further testing. [But] in my opinion, complete cleanliness has no significance in the military applications of nuclear weapons. The military application most contemplated is the use of a clean weapon in a ground burst against a hard enemy target. In such an application the neutrons coming from the weapons will create radioactivity in the soil next to the weapon. This radioactivity will be carried up with the debris of the weapon itself and will cause fallout in the neighbourhood .... For these reasons, and particularly because of the radioactivity necessarily produced in the ground, it does not seem of practical interest to develop [these so-called "clean" weapons]." See Memo from Hans Bethe to James Killian, April 17, 1958, Series II, PSAC, DDEL; See also Memo, June 17, 1958, Series II, PSAC, DDEL; and Minutes of Meeting with the President, June 17, 1958, Series I, PSAC, DDEL, Abilene.
Despite the information contained in this letter, Eisenhower decided to go ahead with a public statement on March 26 in the hopes that it would help justify the continuation of the American program. According to the press release, which was drafted by the AEC, American scientists had been "making progress in reducing radioactive fallout from nuclear explosions in the belief that basic advances in both the peaceful and military uses of nuclear energy will be achieved."  

Although the AEC and the president hoped that this statement would help improve the U.S. image in the world, the Soviet Union gained the propaganda advantage on March 31 when it announced a unilateral cessation of all nuclear testing. This move put the Eisenhower administration in a very awkward bind. On April 1, the secretary of state, sounding very much like the AEC representatives, publicly dismissed the Soviet announcement as a deceptive political manoeuvre. After all, he pointed out, the Russian statement had come on the heels of an intensive series of Soviet tests. The American government would not be pressured to change its policy on testing simply because the Soviet Union, a

31 President's Press Statement, March 26, 1958, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.

32 In this announcement, the Soviet government encouraged the other nuclear powers to reach an agreement on a nuclear test ban. If the United States and Britain did not respond in a positive way, the Soviets warned, the USSR would feel free to resume testing. See Khrushchev's Letter to Eisenhower, April 4, 1958, Dulles-Herter Series, AWF, DDEL, Abilene. As Divine points out, this announcement came just four days after Marshall Bulganin resigned as premier to allow Khrushchev to become the acknowledged leader of the USSR in title as well as in fact. See Divine, Blowing on the Wind, 200.
notoriously untrustworthy country, had scored a propaganda victory. For the sake of national security, it was important that the United States continue with its testing program, a program which was devoted to developing "defensive nuclear weapons ... with greatly reduced fallout."\textsuperscript{33}

Given the administration's position on testing, the State Department felt it had no choice but to respond publicly in this manner. In private, however, many State officials disagreed with the public stance. When some representatives from the French Embassy asked if the department had considered the possibility that the U.S.S.R. really was interested in a test cessation, Philip Farley, the Special Assistant to the Secretary of State, responded in the affirmative, arguing that the Soviets were "probably ready to accept a test suspension agreement if it should come about." In his view, it was highly unlikely that the Russians would risk losing their favourable position in world opinion by backing out of their commitment to a moratorium or their proposals in favour of an agreement.\textsuperscript{34}

Dulles agreed that the U.S. should take the Soviet announcement seriously. In fact, the secretary of state

\textsuperscript{33} Department of State Statement for the Press, March 31, 1958, Executive Secretary's Subject File Series, WHO, NSC Staff Papers, DDEL, Abilene; Joint State Department-USIA Message to all American Diplomatic Posts, April 2, 1958, DSRG 59, 711.5622/4-258, NA, Washington. Eisenhower made a similar argument in his meeting with the leaders of the legislature. See Minutes of meeting, April 1, 1958, Legislative Meetings Series, AWF, DDEL, Abilene.

\textsuperscript{34} Memo of Conversation, Department of State, March 31, DSRG 59, 711.5611/3-3158, NA, Washington.
suggested that the administration should respond by considering a fundamental change in policy. On April 4, he sent an informal message to the embassies in various NATO countries asking them to estimate what the response would be to a decision to revise the American position and "loosen the link between test suspension and nuclear cut-off." In Washington, he urged the administration to consider a change in approach. Repeating an argument he made prior to the Soviet announcement, he said that it was imperative that the U.S. do something to erase its reputation as a militaristic nation that "hurts us and causes us to lose more [in terms of world opinion] than we gain from small technical military advances." In his view, the moral isolation of the United States was not worth the further refinements in nuclear weapons that might result from a continuation of testing. If the administration did not act in the next few months to change its policy, indicating to the world that it was serious about bringing the arms race under control, it ran the risk of losing important support from countries such as the U.K., Germany and Japan. Echoing the proposals made by Stassen, Dulles suggested that the best course of action was for the United States to consider an agreement to suspend testing (perhaps for

35 Telegram from the Secretary of State to the American Embassy in Paris, April 4, 1958, DSRG 59, 711.5611/4-358, NA. Even before the Soviet announcement, Dulles had hinted to the French that he was considering the possibility of dropping the link. See Telegram from the Embassy in Paris to the Department of State, March 27, 1958, DSRG 59, 711.5611/3-2758, NA, Washington.

36 Memo of Conversation, April 26, 1958, Dulles-Herter Series, AWF, DDEL, Abilene.
two years) separate from other disarmament measures.37

For this proposal, the secretary of state drew on the report of a panel of experts established by the President's Science Advisory Committee (PSAC).38 Before the creation of this committee, which was founded in late 1957, the State Department had been handicapped by its inability to counter the arguments of the AEC and DOD with scientific evidence. This time, however, the department had the assistance of the the panel set up by the PSAC. After careful study, this group of experts, headed by the distinguished physicist Hans Bethe, had concluded that a practical detection system could be devised that would identify nuclear tests in the Soviet Union, except for very small underground explosions. By using a combination of observation stations, inspection teams, and over-flights, it would be technically feasible to monitor a test suspension agreement. In addition, the PSAC also reached some conclusions regarding the comparative drawbacks for the United States and the Soviet Union from an accord to suspend tests. In their view, continued testing would benefit the Soviet weapons program more than it would the American program. The U.S. still had a technical superiority in nuclear bombs and missile warheads. If an

37 Ibid. Dulles made similar arguments on April 30 during a meeting with representatives from the Defense Department and the Atomic Energy Commission. See Memo of Meeting for the President, April 30, 1958, Dulles-Herter Series, AWF, DDEL, Abilene.

38 The Eisenhower Administration created this agency as part of a public relations policy designed to counter the negative impact of Sputnik. See Robert Divine, The Sputnik Challenge: Eisenhower's Response to the Soviet Satellite (Oxford, 1993), 51.
agreement to cease testing was not reached in the near future, the U.S.S.R. would soon reach a "comparable capability." Given the likelihood of this parity, it was in the best interest of the U.S., from both a military and technical point of view, to reach an accord. 39

Supported by this information, combined with the political arguments in favour of an agreement, Dulles attempted to persuade the administration to change its position. Although the president indicated some concern about world opinion, 40 he seemed unpersuaded by the arguments made by the Science Advisory Committee. The defense bureaucracies were also intransigent. Admiral Strauss doubted the State Department's conclusion that an agreement on testing would improve the U.S. reputation in the world. According to him, the world realized that the real danger was not nuclear testing but the threat of a nuclear war initiated by the Russians. As he explained,

If we were to freeze testing, the Soviet Union would still have proven nuclear warheads ... together with offensive delivery systems. The United States would not have defensive systems. And the U.S. will need clean warheads since defensive missiles would be exploded over the heads of us and our allies. 41

39 Draft Paper Prepared by the PSAC, April 17, 1958, Series I, WHOSAST, DDEL, Abilene.

40 During one meeting, President Eisenhower said that he "felt that we were facing a psychological erosion of our position with respect to nuclear testing, and that we must take this fact into account along with the other pros and cons respecting the cessation of nuclear testing." See Minutes of NSC meeting, April 3, 1958, NSC Series, DDEL, Abilene.

41 Memo of Conversation, April 26, 1958, Dulles-Herter Series, AWF, DDEL, Abilene.
The DOD and the JCS agreed with the AEC's rather unpersuasive argument. Defense representatives claimed that it was not to their advantage to support an agreement on tests unless they could achieve other "important compensating gains." Even if the "Hardtack" tests were a complete success, they argued, further testing would be necessary in order to develop "clean," defensive and tactical nuclear weapons. It was "fallacious" to assume that superiority in numbers or types of nuclear weapons would be maintained or would in itself provide the "Free World" with the capability to cope with "all future situations." On the contrary, given the threat posed by an "unpredictable enemy capability," it would be "far more realistic to call for an increase rather than a decrease in the field of nuclear weapons research and development."

Some historians believe that by April of 1958, the president was shifting his support away from the defense bureaucracies towards the State Department on the testing issue. After all, Eisenhower had directed his defense advisors in late March to "think about what could be done to done to get rid of the terrible impasse in which we now find ourselves with regards to

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42 Ibid.

43 Memo from the Chairman, JCS, to the Secretary of Defense, April 30, 1958, Administration Series, AWF, DDEL, Abilene.

" Memo from Donald Quarles, Department of Defense, April 23, NSC Series, Subject Subseries, WHOSANSA, DDEL; Memo from Department of Defense to James Killian, PSAC, May 6, 1958, Series I, WHOSAST, DDEL, Abilene.
According to Hewlett and Holl, this statement proved that the president was giving notice that "he would soon revamp the United States' disarmament and test-ban policies." Divine concurs with this perspective. Acknowledging that Eisenhower had allowed the Pentagon and the AEC to kill the proposals made by Stassen in January and Dulles in March, Divine believes that by April Eisenhower was determined to "force the long overdue showdown within the administration on test ban policy."

Although Eisenhower did occasionally make statements about the need to bring the arms race under control, there is slight evidence to sustain the contention that he advocated a change of policy regarding testing or disarmament in April 1958, or any other month of that year. On April 7, the president appointed a working group on disarmament policy, called the Committee of Principals. However, the makeup of this group, which was comprised of the Secretary of Defense, the Chairman of the Atomic Energy Commission, the Secretary of State, the director of the Central Intelligence Agency and the president's science advisor, ensured that no new departures would occur in policies related to disarmament or nuclear testing. Although the president did

46 Ibid.
49 Predictably, the principals laboured through mid-April without agreeing on any new initiatives on testing or
worry about the international political problems associated with
the American testing program, he did not support the State
Department's call for a change in policy at this time. Instead,
he sided with the defense bureaucracies, using their arguments
(which were often misleading) to explain to the American public
why testing must continue.

On April 30, the president had a pre-press conference
meeting with his new science advisor, James Killian. After
Sputnik, Killian had been appointed as the head of the new
President's Science Advisory Committee. Though not a research
scientist, Killian was an able administrator who had gained the
confidence of the American scientific community. Previously, he
had served on the Office of Defense Mobilization's advisory board
and chaired the President's Board of Consultants on Foreign
Intelligence Activities.50

During the meeting with Killian, the president explained
that he was going to tell the public that the entire U.S. testing
program (for the past five years) had been geared towards making
cleaner nuclear weapons of all sizes, with particular emphasis on
the smaller bombs. Killian tried to dissuade Eisenhower from
making this inaccurate statement, pointing out that the Defense
Department had actually never made any specific requirements for

disarmament. The Department of State, the Central Intelligence
Committee, and the president's science advisor supported a test
ban, while the Atomic Energy Commission and the Department of
Defense favoured continued testing. See Hewlett and Holl, Atoms
for Peace and War, 480-1.

50 Divine, Blowing on the Wind, 171.
small clean bombs. In addition, the U.S. had tested many large weapons in the recent past which had been "much dirtier than the bomb used in Hiroshima." Nevertheless, during his press conference, the president claimed that the U.S. was carrying out hydrogen tests which were "much less dirty" than previous bombs. In fact, "at least 40 percent" of American tests were designed to make cleaner weapons. Because the Soviet Union had rejected the "very sensible" American proposal at the London talks (in August, 1957), Eisenhower argued, his government was not interested in advancing a new position on testing.

When he made this statement in favour of continued testing, the president was aware that he could expect Congressional and public approval. In early May, a Gallup poll indicated that Americans now agreed with the opponents of a test ban. When asked whether the "U.S. should stop making tests with nuclear weapons and H-Bombs", 60 percent said no, while only 29 percent replied yes, with 11 percent expressing no opinion. Although a survey taken in April 1957 had shown a majority favouring a negotiated test ban, this poll indicated that by a two-to-one

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51 Pre-Press Conference Briefing, April 30, 1958, Diary Series, AWF, DDEL, Abilene.


53 Ibid.

54 Strauss mentioned this poll to the president during a meeting. See Memo of Conversation with the President, May 14, 1958, Subject Series, Alphabetical Subseries, WHOSS, DDEL, Abilene.
margin the American people rejected a unilateral halt to nuclear testing.\(^5\)

The poll taken in 1958 undermines Appleby's argument that public opinion and congressional activism pressured the president to change his stand on testing during that year.\(^6\) In his study of public opinion on the nuclear testing issue, Eugene Rosi found no evidence that domestic pressure influenced the Eisenhower administration in favour of a test ban. Rather, the American public was looking to the administration for leadership on the testing issue. As Divine points out, this meant that "the president and his advisors had great freedom to act in 1958." Although the April Gallup poll also revealed that 46 percent of those surveyed believed that "continued testing might harm future generations," they apparently believed the administration's argument that this risk was necessary to protect "national security."\(^7\)

In the spring of 1958, Senator Hubert Humphrey, the prominent Democratic liberal from Minnesota, testified in favour of a test ban during hearings in the Disarmament Subcommittee in Congress. However, these hearings exerted very little pressure on the administration. As Eisenhower himself remarked shortly after these hearings began, the support for a test ban in the


\(^6\) Appleby, "Eisenhower and Arms Control," 260.

U.S. was isolated, consisting of only "Humphrey and a few more shouting." 58

Although domestic opinion seemed satisfied with the American position on testing, international pressure forced the Eisenhower administration to reconsider its policy in the spring of 1958.

As in the past, most of this pressure came from the Soviet Union, Japan and Britain. In early May, the Soviet government again asked the United States and Britain to join it in a summit meeting at which the negotiation of an agreement to halt nuclear testing would be at the top of the agenda. According to the Russians, it would be better to place more emphasis on economic collaboration and the development of international trade, rather than on the arms race. 59 From Japan, the American embassy reported that the U.S.S.R. was winning the propaganda war on the testing issue. The Russian decision to suspend tests had caused a sensation in Japan. Because the Soviet moves toward a test ban agreement were welcomed by all sectors of Japanese society, the government there expressed the hope that the U.S. and Britain would respond in a positive manner. 60 In Britain, opposition to

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60 See three telegrams from the American Embassy in Tokyo (MaCarthur) to the Department of State, April 1-2, DSRG 59, 711.5611/4-158,258, NA, Washington.
testing was on the rise. Groups like the Campaign for Nuclear Disarmament and the Direct Action Committee Against Nuclear War garnered widespread support for their protest against testing. In particular, these groups had recently opposed the U.S. government's decision to forcibly prevent the Golden Rule, a ship carrying American protesters, from entering the restricted testing zone in the Pacific. On April 24, the four-man crew of this ship was arrested in Hawaii for violating an Atomic Energy Committee regulation. Their vessel was seized and they were placed in jail for sixty days.

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61 In May 1958, Gallup asked the British public, "Do you think the United States and Britain should stop making tests with nuclear weapons and H-Bombs, or not?" In response, forty-three percent answered "should stop now," nineteen percent "should stop after present tests completed," twenty-eight percent "should not stop," and ten percent "don't know." See George Gallup, ed., The Gallup International Public Opinion Polls: Great Britain, 1937-1975 (New York, 1976), I: 463.

62 Telegram from the American Embassy in London to the Department of State, May 7, 1958, DSRG 59, 711.5611/5-28, NA. On January 8, 1958, four Americans, under the leadership of antinuclear activist Albert Bigelow, informed Eisenhower of their intention to sail into the Pacific test site in an effort to halt the "monstrous delinquency of our government in continuing actions which threaten the well-being of all men." In their view, "more than words" were required to challenge the "apparent willingness of Americans to accept any horror in the name of national defense." See Message from the Non-Violent Action against Nuclear Weapons to President Eisenhower, January 8, 1958, DSRG 59, 711.5611/1-858, NA, Washington.

63 Letter from Lewis Strauss to Secretary Dulles, May 2, 1958, DSRG 59, 711.5611/5-28, NA, Washington. Impressed with the courage of the crew aboard the Golden Rule, an American anthropologist named Earle Reynolds and his family attempted to sail their boat, the Phoenix, into the restricted zone in July to protest against Hardtack. They were stopped by the Coast Guard, taken to the U.S. Navy base on Kwajalein, and then flown back to Hawaii, where Reynolds was tried, found guilty of violating an AEC regulation, and sentenced to a two year jail term. See Telegram from Tokyo (Macarthur) to Secretary of State, July 23,
As a result of the aroused domestic and international political opinion against testing, the British government on May 5 informed the State Department that it was considering a possible change in its own policy. Since an inspection system would be an important part of any agreement on testing with the Russians, the U.K. recommended the establishment of a panel of technical experts to discuss the possibility of devising a workable system. When Khrushchev made a similar proposal to Eisenhower a few days later, the State Department realized that the United States must respond in a positive manner. Accepting advice from the secretary of state, the president informed the U.S.S.R. that the United States would agree to send experts to a technical conference in Geneva in which representatives from the Soviet Union, Britain, France and Canada, would also participate. According to Divine, Eisenhower's decision to send these delegates represented a shift in the American policy on testing: "once the Soviets agreed to hold the proposed technical talks, then the U.S. would be publicly committed to a separate test ban


64 The U.K. also asked the U.S. to share the conclusions of the Killian group on this subject. See Memo of Conversation between State Department and U.K. Embassy, May 5, 1958, DSRG 59, 711.5611/5-258, NA, Washington.

65 Letter from Khrushchev to Eisenhower, May 9, 1958, International Series, AWF, DDEL, Abilene.
negotiation." From the beginning, however, it was obvious that the administration did not send delegates to these talks with the view that they were on a "diplomatic mission," as Divine describes it. Quite the contrary, in his message to Krushchev prior to the conference, the president made it clear that the United States had consented to the technical talks without any commitment to study the political questions related to a possible test suspension agreement. In briefing the American delegation, Dulles explained that their task at the conference was purely technical and scientific, not political. Eisenhower himself told the delegates that the idea was to "prepare plans on the assumption that U.S. views [would be] adopted at the conference." Finally, as Divine himself points out, the administration appointed no high level diplomats to attend the talks. The American delegation consisted of two scientists who were supported by fifteen advisors, including more scientists, representatives from the AEC and the CIA, and three junior

66 Divine, Blowing on the Wind, 211. In another work, Divine makes a similar argument, suggesting that "Without making any explicit promises, the administration was signaling the Russians its intention of entering into a test ban agreement once the inspection problem had been solved." See Divine, Eisenhower and the Cold War, 129.

67 Divine, Blowing on the Wind, 217.

68 Telegram to Khrushchev from Eisenhower, June 6, 1958, International Series, AWF, DDEL, Abilene.

69 Divine, Blowing on the Wind, 216.

70 Memo of Conversation between the President and members of PSAC, June 18, 1958, Diary Series, AWF, DDEL, Abilene.
officials from the State Department. In contrast, the Soviet government, which seemed to place greater value on the political implications of the conference, sent a high level official, Semyon K. Tsarapkin, to Geneva. A veteran diplomat, Tsarapkin had served with the Soviet UN delegation since 1947.

On June 30, the day before the Geneva conference opened, Lewis Strauss stepped down as the head of the AEC, the position he had held since 1953. In a farewell speech, he reiterated his opposition to any agreement on nuclear testing. It was a "false and dangerous assumption," he warned, to believe that a test ban would not weaken national security. Calling the fallout hazard "negligible," he argued that the real peril for the human race was not "in the consequence of testing weapons but in the

71 The administration appointed scientist James Pisk, the executive vice-president of Bell Telephone Laboratories, to head the U.S. delegation. The other American delegate was Professor Robert Bacher of Cal Tech. Both were members of the PSAC. The British named Sir John Cockcroft and Sir William Penney; the French, Yves Rocard of the Ecole normale superieure de Paris; and the Canadians Dr. Ormond Solandt, former chairman of Canada’s Defense Research Board. See Divine, Blowing on the Wind, 216; Hewlett and Holl, Atoms for Peace and War, 539.

72 Divine, Blowing on the Wind, 217.

73 By this time, Strauss had lost a lot of support in Congress as a result of his inflexible views regarding nuclear reactor policy. Insisting that private industry had shown great interest in the development of nuclear power, Strauss saw no need for a government-financed program. As a result of these views, Senate Majority Leader Lyndon B. Johnson predicted in February 1958 that Strauss could not be reappointed without "a knock down, drag-out fight." On the last day of March 1958 Strauss wrote the president to acknowledge that his reappointment as chairman was not politically feasible. See Hewlett and Holl, Atoms for Peace and War, 427, 489.
danger of atomic war."\textsuperscript{76} According to Divine, Eisenhower disagreed with Strauss' view on testing by this time.\textsuperscript{75} However, there is not much evidence to support this perspective. More often than not, the president had sided with the AEC chair over the State Department on issues related to tests. Eisenhower had great respect for the AEC chairman. In fact, when the administration was considering whether Strauss should serve another term, the president stated that he "would like to name him permanent chair."\textsuperscript{76} If Strauss decided against further service at the AEC, Eisenhower told his advisors that he would think well of having him "take charge of the whole Atoms for Peace program under Secretary Dulles in the State Department."\textsuperscript{77} When Strauss chose not to continue in his post, the president acknowledged his high regard for the departing AEC chair by awarding him the Medal of Freedom.\textsuperscript{78}

Eisenhower's choice of successor for Strauss also undermines Divine's view that the president was "leaning toward a test ban" at this time.\textsuperscript{79} He chose John A. McCone, a wealthy California industrialist, to serve as the new head of the Atomic Energy

\textsuperscript{74} Quoted in Divine, \textit{Blowing on the Wind}, 218.
\textsuperscript{75} Ibid.
\textsuperscript{76} Memo, "Atomic Energy Matters," March 26, 1958, Diary Series, AWF, DDEL, Abilene.
\textsuperscript{77} Memo of Conference with the President, May 14, 1958, Subject Series, Alphabetical Subseries, WHOSS, DDEL, Abilene.
\textsuperscript{78} Divine, \textit{Blowing on the Wind}, 218.
\textsuperscript{79} Divine, \textit{Blowing on the Wind}, 210.
Commission. Owner of a West Coast shipyard as well as a partner
in a large construction company, McConne had been active in the
Republican party, contributing heavily to Eisenhower's
presidential campaigns. His friendship with the president went
back to the years when McConne had served as special deputy to
Secretary of Defense James Forrestal in 1948, and as the Under
Secretary of the Air Force in 1950. An influential spokesman for
the aircraft and other defense-related industries of Southern
California after leaving government service, McConne had long held
hardline views on the Soviet Union. In 1956, he had criticized
Adlai Stevenson's proposal for a test ban as a "dangerous
procedure" and as a member of the Cal Tech board of trustees he
had publicly attacked members of the faculty for supporting
Stevenson's call for a halt to nuclear testing.80

After the Senate quickly approved McConne's nomination in
July,81 the president reminded the National Security Council of
the importance of the role of the AEC chairman. Eisenhower
wanted the NSC to understand that McConne was part of the "family
of the Executive Branch of Government." The president said that
he would make a personal effort to ensure that the head of the
Atomic Energy Commission was "identified ... with the formulation


81 According to Divine, "the Senate confirmed [McConne's]
appointment easily, with the Joint Committee on Atomic Energy
failing to probe his views on testing in the one brief hearing
held on his nomination." See Divine, Blowing on the Wind, 219.
of national policy. Given these instructions, as well as McCone's public record on the testing issue, it is difficult to believe that Eisenhower seriously contemplated a major shift in the administration's policies regarding testing or disarmament in the summer of 1958.

In early July, the United States received more negative publicity regarding its tests in the Pacific. At this time, the Japanese protested again after the United States announced that it was expanding the danger zone. More serious problems started on July 16 when the American Embassy in Tokyo reported that two days earlier two ships, the Takuyo Maru and the Satsuma Maru, had been "caught in the fallout" when they were about one hundred miles outside the danger area (near the Truk islands, in Micronesia). As the embassy explained, this was a "most unfortunate affair that could not have come at a worse time." Both ships reported high levels of radioactivity (fifteen times the normal background readings) and at least ten crew members had very low blood counts.

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82 Memo for the Record, September 12, 1958, Special Assistants Series, Presidential Subseries, WHOSANSA, DDEL, Abilene.

83 Telegram from the American Embassy in Tokyo (MacArthur) to the State Department, July 1, 1958, DSRG 59, 711.5611/7-158, NA, Washington.

84 Telegram from American Embassy in Tokyo (MacArthur) to Department of State, July 16, 1958, DSRG 59, 711.5611/1758; Telegram from American Embassy in Tokyo (MacArthur) to the State Department, July 21, 1958, DSRG 59, 711.5611/7-2158; Telegram from Canberra (Sebald) to State Department, July 22, 1958, DSRG 59, 711.5611/7-2258; Telegram from State Department to American Embassy in Tokyo, August 4, 1958, DSRG 59, 711.5611/8-458, NA, Washington.
In order to avoid the public relations disaster that occurred as a result of the Fukuryu Maru incident in 1954, the embassy recommended that the State Department cooperate with the Japanese government as closely as possible. Upon receipt of requests for assistance from the Japanese Foreign Office, the State Department acted quickly, agreeing to send decontamination equipment and AEC medical personnel to examine the injured crewmen who had been taken to the hospital in Rabaul, Papua New Guinea. On July 26, the AEC medical team reported from Rabaul that some members of the crew had below average white blood cell counts. However, the Atomic Energy Commission did not consider these low counts to be a serious problem. In its report to the Department of State, the agency concluded that there was "no evidence at this time of any detectable effects resulting from exposure to ionizing radiation." The AEC gave two rather vague explanations for the low white blood counts: one, the crewmen already had low counts before the incident (apparently this was "normal" for some individuals); or two, they were the "result of one or more several causes" unrelated to the American tests.

Although the embassy in Tokyo tried to suppress any

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85 Telegram from American Embassy in Tokyo (MacArthur) to Secretary of State, July 22, 1958, DSRG 59, 711.5611/7-2258; Telegram from Secretary Dulles to Canberra, July 22, 1958, DSRG 59, 711.5611/7-2258, NA, Washington.

86 Telegram from the Department of State to the American Embassy in Tokyo, July 26, 1958, DSRG 59, 711.5611/7-2558; Evaluations in AEC's Division of Biology and Medicine Report, August 4, 1958, DSRG 59, 711.5611/8-458, NA, Washington.

87 Ibid.
publicity surrounding the incident, they were unsuccessful. The Japanese press and radio ran stories highly critical of the American testing program. Some accounts raised doubts about the AEC's medical evaluation, reporting that a number of the crewmen were seriously ill. Others commented on the paradoxical nature of American policy. The Tensie Jingo, characterizing the recent case as the "Second Fukuryu Maru Incident," pointed out that radioactive fallout was falling outside the danger zone, at the same time that the American government was claiming that its nuclear tests were designed to develop "clean" nuclear weapons. Some articles went even further, alleging that in order to justify the continuation of testing, the United States had only been claiming to develop "clean" bombs when in reality they were planning to make some of their bombs even "dirtier," as proven by the considerable amount of radioactive fallout that fell on the Takuyo Maru and the Satsuma Maru.

In early August, the American embassy in Tokyo reported that "there is no doubt ... that our position and standing in Japan have suffered from this incident." Public opinion was inflamed against U.S. tests and the American government had lost

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88 Telegram from Canberra (Sebald) to Secretary of State, July 24, 1958, DSRG 59, 711.5611/7-2458, NA; Telegram from Tokyo (MaCarthur) to Secretary of State, July 25, 1958, DSRG 59, 711.5611/7-2558, NA; Telegram from Canberra (Sebald) to Secretary of State, July 27, 1958, DSRG, 711.5611/7-2858, NA, Washington.

89 Telegram from Tokyo (MaCarthur) to Secretary of State, July 29, 1958, DSRG 59, 711.5611/7-2958, NA, Washington.

90 Telegram from Tokyo (MaCarthur) to Secretary of State, August 4, 1958, DSRG 59, 711.5611/8-458, NA, Washington.
credibility. The "average" Japanese citizen believed that the recent incident "totally discredited" the claims made by the American government about its testing program. 91

Further undermining American credibility in Japan was the Eisenhower administration's decision to cancel its proposed exhibition test of a "clean" nuclear weapon. According to the official statement, the shot had been cancelled because the invited countries had not shown enough interest. However, the more likely reason was, as the Japanese guessed, that the U.S. wanted to avoid another public relations embarrassment. At this time, the administration could not afford to reveal to the world that it could not produce these weapons. 92

Meanwhile, at the Geneva Conference of Experts, which began on July 1, the tide was also turning against the American position on testing. James Fisk, the head of the U.S. delegation, reported in August that important progress was being made in the talks as a result of the flexibility shown by the Soviet Union. After serious and detailed negotiations with the delegates from the western powers (U.S., U.K., France and Canada), the Soviets had made significant concessions in three areas: they agreed to some over-flights over the U.S.S.R., they agreed to allow on-site inspection, and they accepted the main

91 Ibid.

92 Ibid. For the official U.S. statement, See Telegram from Secretary Dulles to the U.S. Delegation at the UN, New York, July 25, 1958, DSRG 59, 711.5611/7-2558, NA, Washington; and OCB Minutes, July 30, 1958, OCB Secretariat Series, WHO,NSC Staff Papers, DDEL, Abilene.
points of the system proposed by the United States. In Fisk's view, the Soviet desire to reach an accord on testing was motivated mainly by security concerns. They were anxious about the proliferation of nuclear weapons to additional western powers such as West Germany. They were also worried that China would build its own bomb and that nuclear weapons might get into the hands of one of the Soviet satellites.93

Even President Eisenhower was impressed with the Soviet concessions during these negotiations. During a conversation with the chief executive, James Killian informed him that the talks in Geneva were going very well -- "better than expected." This progress surprised the president, who recalled in his memoirs that "We had expected the Soviet technicians [delegates] to be more politically oriented and negative than they turned out to be."94 By mid-August, the experts from East and West had agreed that an accord to suspend tests could be effectively

93 Report presented by Dr. James B. Fisk, August 27, 1958, NSC Series, AWF, DDEL. Fisk's conclusions were supported by observations made by Victor F. Weisskopf, a physicist at MIT. At a recent Pugwash conference, Weisskopf had talked to the geophysicist named Federov who had been the chairman of the Russian delegation at the Geneva conference of experts. According to Federov, the Soviets realized that a test ban would represent a military loss for the U.S.S.R. Nevertheless, they believed that the non-military advantages of an agreement, such as the avoidance of further proliferation, outweighed the disadvantages. Federov also indicated that although a bitter debate between test supporters and test opponents had occurred within the Soviet government, the latter seemed to have been in the lead, at the present time. See Letter from Victor F. Weisskopf to James Killian, September 27, 1958, Series I, Subseries B, WHOSAST, DDEL, Abilene.

supervised and enforced.\textsuperscript{95}

Although the American delegates had been instructed to discuss only the technical aspects of an inspection system, Killian explained to the president that that it had been extremely difficult to separate the technical from the political implications. In his opinion, the time was fast approaching when the United States would again be asked to support a cessation of tests. Eisenhower agreed that the conclusions of the Geneva experts added great weight to the argument in favour of a diplomatic negotiation to cease testing.\textsuperscript{96} From a political point of view, the United States really had no choice but to negotiate. However, the president also believed that it would be very difficult to reach an accord due to the opposition "within our own country, where ... advisors are in complete disagreement as to the course that should be pursued."\textsuperscript{97} Dulles concurred with Eisenhower, predicting that "some split [between State and

\textsuperscript{95} The experts recommended a network of 160-70 control posts. About 110 posts would be located on continents, with the remainder established on oceanic islands. As for the location of these posts, the experts suggested North America - 24, Europe - 6, Asia - 37, Australia - 7, South America - 16, Africa - 16, Antarctica - 4, and 60 scattered on islands. Each post would be manned by about 30 persons. In addition, some provision for on-site inspection would be required. With the exception of high-altitude tests, the experts were confident that the proposed control system would detect most tests larger than one kiloton. See Letter from Brundrett to Sir Richard Powell, Minister of Defence, December 15, 1958, FO371/132697, PRO. See also Hewlett and Holl, \textit{Atoms for Peace and War}, 542, 653(n.11).

\textsuperscript{96} Memo of Conversation between the president and James Killian, August 4, 1958, Diary Series, AWF, DDEL, Abilene.

\textsuperscript{97} Staff notes, August 6, 1958, Diary Series, AWF, DDEL, Abilene.
the defence bureaucracies] would develop which the president would have to resolve."

Although he recognized that the biggest obstacle to an accord might be the divisions within his own administration, Eisenhower attempted to put the onus on the allies, arguing throughout the spring and summer (publicly and privately) that the main difficulty was "our failure to get ... France and Britain to agree to a cessation of testing." But, since this was only partially true, the secretary of state advised the president that "he would not place our entire argument against banning tests solely on our allies." By the summer of 1958, the French had moved closer to the American position on testing. Under Charles de Gaulle, the French government was now opposed to a ban since it was approaching the testing phase of its own nuclear weapons program. After discussing the possibility of a test ban with the French, the British Foreign Secretary reported that they "had no intention of abandoning tests whatever anybody

98 Memo of Conversation with the President, August 12, 1958, White House Memoranda Series, John Foster Dulles Papers, DDEL, Abilene.

99 Divine, Blowing on the Wind, 181, 210-11, 228.

100 Telephone Call from the President to Secretary Dulles, February 5, 1958, Diary Series, AWF, DDEL, Abilene.

101 De Gaulle came to power in the spring of 1958. According to Ambrose, the French nuclear project was "part of de Gaulle's determination to restore the glory and prestige of France, which in turn was part of his program of freeing France from her military dependence on NATO and the United States." See Ambrose, Eisenhower: The President, 478.
else might say or do."102 Like the Americans, the French now favoured a strong link between an accord on testing, the establishment of an effective inspection system, and other measures of disarmament, particularly the cut-off of all nuclear weapons manufacture.103

In contrast to the French, the British position on testing was becoming increasingly divergent from that of the U.S. In late June, Congress had passed an amendment to the Atomic Energy Act granting the exchange of specified nuclear information and materials with the U.K.104 With this amendment, the British believed that the United States would provide them with the designs of certain types of thermonuclear weapons already tested.105 This development, which reduced the need for British tests, combined with strong domestic political pressure, made the


103 Telegram from the American Embassy in Paris to the Department of State, March 27, 1958, DSRG 59, 711.5611/3-2758, NA; Telegram from the American Embassy in Paris to the Secretary of State, April 9, 1958, DSRG 59, 711.5611/4-958, NA; Telegram from the American Embassy in Paris to the Department of State, April 17, 1958, DSRG 59, 711.5611/4-1758, NA; Memo of Conversation, Department of State, June 25, 1958, DSRG 59, 711.5611/6-2558, NA; Memo of Conversation between President Eisenhower and the French Foreign Minister, Couve de Murville, August 21, 1958, International Series, AWF, DDEL, Abilene; Disarmament Policy Memo, Foreign Office, September 15, 1958, FO371/132686, PRO; Memo from the Director of Intelligence and Research to the Secretary of State, November 10, 1958, DSRG 59, 711.5611/11-758, NA, Washington.

104 Congress amended the Atomic Energy Act of 1954 on June 30 and Eisenhower signed the legislation on July 2. See Hewlett and Holl, Atoms for Peace and War, 538.

government in the U.K. more flexible about the possibility of reaching an agreement with the Soviets on a test ban.\textsuperscript{106} The British Foreign Office indicated that it would not feel obliged to hold off any sound proposal on testing simply in deference to the French. The British also believed that the "other NATO countries were likely to follow any clear lead from the Americans and ourselves."\textsuperscript{107}

On August 14, the National Security Council met to discuss the American position. As predicted by both Eisenhower and Dulles, there were major divisions within the administration. In order to meet the political situation caused by world opinion (particularly in Allied and neutral countries) the State Department strongly favoured a new proposal on testing. It recommended a two year suspension, with an offer to continue the cessation indefinitely if progress occurred on an agreement to cut-off nuclear weapons production. Warning that the cooperative atmosphere created during the technical talks in Geneva would dissipate if the United States announced any position short of a cessation of testing, James Killian endorsed the State

\textsuperscript{106} Ibid; Telegram from President Eisenhower to Prime Minister Macmillan, July 3, 1958, International Series, AWF, DDEL; Telegram from Eisenhower to Macmillan, August 19, 1958, International Series, AWF, DDEL; Telegram from Secretary Dulles to Eisenhower, August 21, 1958, Dulles-Herter Series, AWF, DDEL; Letter from John McCone to Eisenhower, November 10, 1958, Subject Series, Alphabetical Subseries, WHOSS, DDEL, Abilene.

\textsuperscript{107} Telegram from Harold Caccia to the Foreign Office, October 17, 1958, FO6371/132686, PRO, Kew.
Department's stand.\textsuperscript{108}

In sharp contrast, the Joint Chiefs of Staff strongly advised against any change in existing policy. From a military point of view, they were convinced that a test suspension would be harmful to American interests. If the United States agreed to suspend testing for two years, world opinion might not permit the resumption of the program. The Department of Defense agreed with the JCS. Although recognizing the necessity of some new step to offset another possible Soviet propaganda coup, Defense did not approve of State's proposal to offer a suspension of testing prior to the establishment of an effective inspection system and an agreement to cut off weapons production. Despite the PSAC's conclusions to the contrary, the DOD was also pessimistic about the possibility of setting up an effective inspection and monitoring system.\textsuperscript{109}

John McCone, the new head of the Atomic Energy Commission, explained that his agency was solidly opposed to the State Department's position. Believing that there was a way to get around the public relations problem associated with atmospheric testing, he recommended that the administration propose that it would henceforth conduct all of its tests underground.\textsuperscript{110} The

\textsuperscript{108} Summary of NSC meeting held in the State Department, August 14, 1958, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.

\textsuperscript{109} Ibid.

\textsuperscript{110} Ibid. See also Memo from the JCS to the Secretary of Defense, August 15, 1958, Diary Series, AWF, DDEL; and Memo of Conversation, August 18, 1958, AWF, DDEL, Abilene.
president liked this idea. Acknowledging the power of world opinion, he admitted that he too favoured continued underground testing.\textsuperscript{111} McCones proposal was doubtless attractive to Eisenhower because it would serve the interests of both the State Department and the defense bureaucracies: the United States could improve its image in the world and at the same time continue to develop its arsenal of nuclear weapons, albeit underground.

On August 18, McCone made his proposal even more appealing by suggesting that the president should claim that underground tests would be used only to further the goals of the "Plowshare" program, which placed more of an emphasis on the peaceful, rather than the military, applications of nuclear energy. He cited the possible use of atomic explosions to extract oil from the Athabaskan sands and to produce heat power from the salt domes of the Southwest. Impressed with this suggestion, the president stated that he had been searching his mind to come up with just such an exception for inclusion in a proposal to suspend testing. Unlike Eisenhower, the State Department disliked McCone's idea, based on the PSAC's conclusion that it would be impossible to develop a monitoring system which could distinguish between nuclear explosions for peaceful purposes and those for weapons purposes. In the State Department's view, the United States

\textsuperscript{111} Hewlett and Holl, \textit{Atoms for Peace and War}, 544. About a week later, Eisenhower conveyed his concern to the British Prime Minister that "much of world opinion is shifting, if not toward the Soviets, at least away from the West because of our alleged intransigence about all aspects of nuclear testing and so on." See Telegram from Eisenhower to Macmillan, August 20, 1958, International Series, AWF, DDEL, Abilene.
would lose the entire political advantage if it included a loophole like this in its proposal. Nevertheless, the president decided to accept the AEC's advice.112

On August 22, after consulting with the British and French governments, Eisenhower publicized the new American posture in a statement to the press. Given the successful conclusion of the technical conference in Geneva, the United States was now prepared to meet with the other nuclear powers to discuss the possibility of reaching an agreement on testing and the establishment of an international control system. If the other powers agreed to begin negotiating on October 31, the U.S. would withhold testing for one year from that date. Suspension beyond the first year, however, would only be considered if an effective inspection system was installed and if satisfactory progress was made regarding other disarmament measures. In addition, the president indicated that any future agreement on nuclear testing should include a clause allowing for the detonation of nuclear bombs "for peaceful purposes, as distinct from weapons tests."113

In making this announcement, Eisenhower offered no indication that the United States had made a major change in its disarmament policy or had broken the linkage between nuclear

112 Summary of Meeting held in State Department, August 14, 1958, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL; Memo of Conversation, August 18, 1958, Diary Series, AWF, DDEL, Abilene.

113 Press Statement by President Eisenhower, August 22, 1958, Subject Series, Alphabetical Subseries, WHOSS, DDEL; See also Minutes of NSC Meeting, November 12, 1958, RG 273, File 000.9, NA, Washington.
weapons testing and disarmament established in the 1957 London disarmament proposals. At a subsequent news conference, when asked whether the United States had shifted its policy on testing or disarmament, Eisenhower rather vaguely replied that the United States had not altered its "general program or plan," nor abandoned the "principle" of American policy.  

President press secretary James Hagerty, when asked by reporters to clarify Eisenhower's proposal to allow continued testing for "peaceful purposes," explained that nuclear explosions could be used "to mine oil and minerals and to make new harbours and waterways." What he did not reveal, of course, was that this reference to "peaceful purposes" was intended as a loophole in the American proposal -- an "escape clause" -- (as the State Department later described it) which provided for the continuation, rather than the cessation, of testing.

Some observers noted how favourable the timing was for the president to make his public statement. The AEC had just completed "Hardtack," assuring the Pentagon that the lead over

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115 News Conference with James Hagerty, August 22, 1958, Subject Series, Alphabetical Subseries, WHOSS, AWF, DDEL, Abilene.

116 Although Dulles supported the president's decision to include the reference to peaceful explosions in the proposal, he was under no illusion as to what this really meant. To one State Department subordinate, he conceded that "there may or may not be a mechanistic difference between the devices [bombs] which are used for military purposes and the devices used for peaceful purposes." See Telegram from Dulles to the Acting Secretary of State, August 21, 1958, Subject Series, Alphabetical Subseries, WHOSS, DDEL, Abilene.
the Soviets in the development of the latest nuclear weapons was assured, albeit temporarily. In addition, the U.S. was almost finished with "Argus," a secret series of tests in which three 1- to-2 kiloton bombs were detonated three hundred miles above the south Atlantic.

In late August, the Eisenhower administration announced a third series of tests, called "Hardtack II," which took place at the Proving Ground in Nevada. This set of tests, dubbed "Operation Deadline" by the press, had originally been scheduled for the spring of 1959. However, the Atomic Energy Commission convinced the president to move up the date, ostensibly in order to test some of the smaller tactical weapons and to experiment further with underground explosions. Over a period of six weeks, the AEC conducted at least thirty-seven tests, including one of a nuclear bazooka shell designed to be fired by two men at fairly close range.

117 Divine, Blowing on the Wind, 228.

118 Richard Miller, Under the Cloud: The Decades of Nuclear Testing (New York, 1986), 308; Hewlett and Holl, Atoms for Peace and War, 483. Apparently, the U.S. also undertook other secret tests in the Atlantic during the time of the Hardtack series. According to one top secret memo, the DOD set up monitoring stations in South Africa in order to measure the effects of "Operation Floral," a series of tests "involving low yield nuclear warheads ... conducted in a remote area of the South Atlantic." No announcement of this series was planned "unless the phenomena resulting from the tests were of such magnitude as to be evident to shipping or the mainland." See Memo from Donald Quarles, Deputy Secretary of Defense, to the Secretary of State, November 17, 1958, DSRG 59, 711.5611/11-1758, NA; Memo from Under Secretary of State (Herter) to Quarles, November 25, 1958, DSRG 59, 711.5611/11-1758, NA, Washington.

119 Divine, Blowing on the Wind, 231-2; Hewlett and Holl, Atoms for Peace and War, 548.
Like the United States, the other two nuclear powers also carried out a flurry of last minute testing.\textsuperscript{120} According to Hewlett and Holl, the Soviet tests were much "dirtier" than the American because the U.S. concentrated on underground explosions.\textsuperscript{121} However, as Divine points out, the AEC grew very careless in its attempt to squeeze in as many tests as possible before the moratorium took effect.\textsuperscript{122} An underground shot named "Evans" vented radioactive debris onto the Nevada test site on October 28. The next day, two large above-ground, "dirty" tests, "Humboldt" and "Santa Fe," were detonated, resulting in high radiation levels in Salt Lake City and St. George, Utah.\textsuperscript{123} Radioactive clouds also reached southern California, increasing the level of radioactivity in the Los Angeles atmosphere to one hundred and twenty times the normal amount. Although this was the highest recorded reading of radiation in the United States outside the proving grounds, the AEC continued with the series, claiming that the level of fallout was "harmless."\textsuperscript{124}


\textsuperscript{121} Hewlett and Holl, \textit{Atoms for Peace and War}, 548.

\textsuperscript{122} Divine, \textit{Blowing on the Wind}, 231-2.

\textsuperscript{123} Howard Ball, \textit{Justice Downwind: America's Atomic Testing Program in the 1950s} (Oxford, 1986), 83.

\textsuperscript{124} Divine, \textit{Blowing on the Wind}, 232; Miller, \textit{Under the Cloud}, 308.
Despite the AEC's comforting assurances, many people living and working near the Nevada Test Site suffered from exposure to dangerous levels of radiation. Laverl Snyder and her family loved to camp in the mountains and desert close to their home in Ruth, Nevada. She was pregnant with her third child during "Hardtack II." She recalled one camping trip that changed her life and the life of her unborn child:

I remember seeing lots of clouds. I broke out in a rash. My whole body. Burns and blisters, little ones like water blisters, spread up my arms and on my face, soon my entire body. I was sick a lot, nauseous all the time. They took me to Holy Cross Hospital in Salt Lake City... My toenails fell off and I lost a lot of hair. It almost killed me. Diana Lee was born early, about three weeks early, and only weighed 3.2 pounds...

Shortly after, Diana Lee was diagnosed with cancer. At six months, the baby had her first surgery to remove a neuroblastoma tumour in her chest.126

Herman Hagen worked as a "recovery" man during the "Hardtack II" series. He was expected to walk directly over "hot ground" to recover instruments placed in tunnels near the tests to measure the levels of radioactivity there. When Herman's aunt from Norway asked if this was a safe job, he assured her that "Our government wouldn't let us work there if it was harmful." Later, he died of multiple myeloma cancer of the bone marrow.127

In late August, the Public Health Service reported that

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126 Ibid.

127 Gallagher, American Ground Zero, 49-50.
levels of strontium-90, a radioisotope capable of causing possible "long-term ... health impairment," had increased considerably. According to a document submitted by the Public Health Service to the Department of Health and Welfare, data gathered by a Milk Sampling Network (established in the spring of 1957 in Sacramento, Salt Lake City, St. Louis, Cincinnati, and New York City) indicated "a rise in concentrations [of strontium-90] over the earlier, lower, levels." Unless there was a cessation of nuclear weapons testing, these levels were "expected to increase." In addition, the Public Health Service warned that "There is increasing evidence that radiation levels previously considered to be safe are in fact hazardous when there is repeated, long-term exposure to them." 128

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When Eisenhower announced that the U.S. would suspend tests for one year and join the other nuclear powers in negotiations at the end of October, many countries, including Canada, believed that this might be a step towards a meaningful agreement. 129 Britain and the Soviet Union were more skeptical, however. Although both countries accepted the American offer to begin these talks, their leaders had concerns about Washington's true

128 Memo from Allen Pond, Staff Assistant on the Subject of Strontium-90 in Milk to Arthur S. Flemming, Department of Health and Welfare, August 21, 1958, Subject Series, Alphabetical Subseries, WHOSS, DDEL, Abilene.

129 See Prime Minister Diefenbaker's Speech to the House of Commons, August 22, 1958, DSRG 59, 711.5611/10-158, NA, Washington.
purposes. In an interview with Pravda, Khrushchev warned that it might be difficult to negotiate if the United States continued to link an agreement to suspend testing with other disarmament measures. The British government also had reservations, especially with regards to the escape clause. The British ambassador informed American officials that his nation's scientists believed that information from the so-called "peaceful" explosions would produce data that could also serve military purposes; it was misleading, therefore, for the American government to claim that such tests would have little military value.

Soon after the U.S. made its proposal, the British Embassy reported to London that some officials in the State Department were already having second thoughts about the offer to suspend tests for one year. Under pressure from the AEC and DOD, these officials were now saying that the U.S. might not suspend testing for this period and begin negotiations unless the other two parties agreed to define, in a more detailed fashion, what they meant by a satisfactory control system. The British were disheartened by this American retreat, having already made a commitment to suspend their tests from the day that negotiations began. Believing that the Soviets had made enough concessions to

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130 Telegram from Hugh Cumming, Director of Intelligence and Research, to Secretary of State, August 30, 1958, DSRG 59, 711.5611/8-3058, NA, Washington.

131 Telegram from Foreign Office to the British Embassy in Washington, October 13, 1958, FO371/132685; Telegram from Harold Caccia at the British Embassy to the Foreign Office, October 18, 1958, FO371/132686, PRO, Kew.
make progress in the diplomatic talks possible, the British thought that it was unrealistic to ask them to accept still more conditions now. Discussion of the details of the control system should be saved for the negotiations. According to the British Embassy, the American position, which seemed "paradoxical and meaningless," was sure to "raise doubts in the public mind as to whether the West really intends to suspend tests for one year." For its part, the embassy found it difficult "not to harbour some suspicion that the Americans may in fact have reservations about doing so."\textsuperscript{132}

Britain, the Soviet Union and the United States all agreed to attend the Conference on the Discontinuance of Nuclear Weapons Tests in Geneva. However, the doubts of British officials about U.S. intentions increased as they tried to pin down the State Department's position on testing prior to the conference, scheduled to begin October 31. During a meeting with Harold Caccia, the British ambassador, Dulles mentioned some of the conditions that the United States might insist on before agreeing to any treaty to suspend testing indefinitely. Washington would probably continue to insist on tying an accord on testing to other disarmament measures; it would also want to maintain the "escape clause" allowing for the testing of nuclear "devices" for "peaceful purposes." The secretary of state realized that the conference would probably fail because the Soviets would not

accept all of the American conditions. This "made it all the more important," he told Caccia, "for the West to handle skillfully the public relations aspects" of the conference."\textsuperscript{133}

The U.S. and Britain would definitely be at a propaganda disadvantage "if it could be alleged that Western intransigence caused the Geneva negotiations to collapse."\textsuperscript{134}

The British Foreign Office worried that American inflexibility would lend proof to such allegations of Western intransigence. Whereas the Soviet position seemed to genuinely favour an accord, the American position, which continued to link an agreement on testing to other conditions, made any progress at Geneva highly unlikely. In Macmillan's view, the American stance was "too tough." The prime minister believed that British public opinion would find the linkage between testing and disarmament to be "unreasonable."\textsuperscript{135} Sharing the Soviet view that the conference should be taken seriously, Foreign Secretary Selwyn Lloyd asked

\textsuperscript{133} Telegram from Harold Caccia at the British Embassy to the Foreign Office, October 10, 1958, FO371/132685, PRO, Kew.

\textsuperscript{134} Telegram from Foreign Office to British Embassy in Washington, October 20, 1958, FO371/132686, PRO, Kew.

\textsuperscript{135} Macmillan, \textit{Riding the Storm}, 568. In November 1958, Gallup asked the British public, "What would you like to see the three countries agree upon" in Geneva? In response, forty-eight percent answered "want to stop H-tests for all time," twenty-eight percent "want to stop H-tests on a year-to-year agreement," seven percent "don't really want to stop," and seventeen percent "don't know." When asked: "What should the British and American attitude be if Russia refuses a year-by-year agreement and insists on an all-time banning of H-tests as an issue quite separate from general disarmament -- accept the Russian offer or continue with tests?" sixty percent answered "accept," eighteen percent "not accept," and twenty-two percent "don't know." See George Gallup, \textit{The Gallup International Public Opinion Polls, Great Britain, 1937-1975} (New York, 1976), I: 482-483.
Washington to consider modifying its position prior to the beginning of the negotiations. Under direction from Lloyd, Harold Caccia approached Dulles on October 16 to ask him if the United States would consider dropping the connection between an agreement on testing and other disarmament measures.\textsuperscript{136}

The State Department was not optimistic that the rest of the administration would accept the British suggestion. The AEC and the DOD were still trying to resist the one-year suspension of tests. To get these bureaucracies to even consider the new British proposal would require a "battle royale." Indeed, when the State Department ran the idea past representatives from the various agencies, it reported that the British proposal "bounced on ice several inches thick."\textsuperscript{137} According to the secretary of state, the Pentagon was "violently opposed" to any concession in the American position. Even if the U.S. did reach an agreement during the talks, getting it through Congress would be very difficult because of "powerful pressure groups" there which supported the AEC and the DOD. Unlike in the U.K., there was not a lot of public support in favour of an accord with the Soviet Union. In fact, Dulles believed that people in the United States

\textsuperscript{136} When Lloyd made this proposal, he explained that he was not pressing the Americans to adopt it at the outset of the conference but to consider it as a fall-back position to use if necessary. See Letter from H.T. Morgan to the Foreign Office, September 30, 1958, FO371/132686; Telegram from Harold Caccia to Foreign Office, October 16, 1958, FO371/132686; Letter from Selwyn Lloyd to Secretary Dulles, November 25, 1958, FO371/132693, PRO, Kew.

\textsuperscript{137} Telegram from H. Caccia in Washington to the Foreign Office, October 18, 1958, FO371/132686, PRO, Kew.
were "more alarmed at the prospects of reaching an agreement than of the failure to do so."\(^{138}\)

During the last week before the talks began in Geneva, the differences between the Americans and the British regarding tactics and policy multiplied. In addition to the linkage between disarmament and a test suspension agreement, new differences emerged over China and the control system.\(^{139}\) The Americans began to argue that China should be included in any treaty because of the risk that the Soviets might conduct clandestine tests there. They seemed to think that the Chinese would gladly cooperate in a test ban agreement. The British Foreign Office disagreed, stating that this was an "inconceivable" possibility. Given that the United States refused to recognize Communist China, it was highly unlikely that this country, which had not yet conducted any nuclear tests, would be willing to open itself up to Western inspection. From the British perspective, it seemed that the U.S. was attempting to create new obstacles which could be used to bar any potential progress in the upcoming negotiations.\(^{140}\)

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\(^{138}\) Telegram from Harold Caccia in Washington to the Foreign Office, October 16, 1958, FO371/132686; See also Telegram from Foreign Office to Washington, October 20, 1958, FO371/132686, PRO, Kew.

\(^{139}\) Telegram from Harold Caccia in Washington to the Foreign Office, October 18, 1958, FO371/132686, PRO, Kew.

\(^{140}\) Minutes from Top Secret Meeting held in the Foreign Office, October 21, 1958, FO371/132686; Telegram from the Foreign Office to the British Embassy in Washington, October 21, 1958, FO371/132687; Telegram from the Foreign Office to the British Embassy in Washington, October 22, 1958, FO371/132686, PRO, Kew.
The Eisenhower administration also started to harden its position on the question of inspection prior to the talks. According to the British, the Americans started to insist that many more inspection teams would be required than anticipated by the experts in Geneva. Based on the conclusions reached by the Conference of Experts, the British believed that two ad hoc inspection teams at each regional headquarters would be sufficient to monitor any agreement. But going far beyond the Experts report, the United States began to contend that at least one hundred "permanent, mobile, and lavishly equipped" teams would be required. Previously, the American administration had agreed with the British that the fear of being caught testing in violation of an international accord was enough to make effective a system with a limited number of inspection teams, but the defense bureaucracies were now asserting that a completely "watertight" system was necessary. The British Foreign Office disagreed with the Americans on this issue because they realized that the Soviet Union would not accept inspection on the scale contemplated by the U.S. The American figure went far beyond the estimate of the Experts Conference and the Soviets would charge, quite rightly, that the real purpose behind such an elaborate inspection scheme was espionage.\footnote{Minutes from Top Secret Meeting held in the Foreign Office, October 21, 1958, FO371/132686; Telegram from the Foreign Office to the British Embassy in Washington, October 21, 1958, FO371/132687; Telegram from the Foreign Office to the British Embassy in Washington, October 22, 1958, FO371/132686, PRO, Kew.}
Nuclear Weapons Tests began in Geneva on October 31, the negotiations deadlocked,\textsuperscript{142} as the British predicted. According to Divine, the U.S. by this time had become more flexible in its approach to a test ban accord while the Soviets had become less so. In particular, Divine believes that there was a "steady shift" in the American position away from the link between an agreement on testing and other disarmament measures.\textsuperscript{143} It is difficult to find evidence to support this viewpoint, however. The talks became deadlocked at the very beginning because the Soviet Union wanted to start by discussing a comprehensive test ban, while the Americans insisted on starting with discussions of an inspection system.\textsuperscript{144} Indeed, during one of the first meetings in Geneva, the head of the U.S. delegation, James Wadsworth, made it clear that the fundamental American position had not changed, i.e., any agreement on testing would be conditional on an effective control system and progress in other areas of disarmament.\textsuperscript{145}

\textsuperscript{142} In the study of international relations, deadlock occurs when at least one side prefers conflict (or defection) to cooperation. See Matthew Evangelista, "Disarmament Negotiations in the 1950s," \textit{World Politics} 42(July 1990): 505.

\textsuperscript{143} Divine, \textit{Blowing on the Wind}, 230-31, 238. Hewlett and Holl support this perspective. See \textit{Atoms for Peace and War}, 551.

\textsuperscript{144} Ambrose, \textit{Eisenhower: The President}, 490.

\textsuperscript{145} Conference on the Discontinuance of Nuclear Weapons Tests, Verbatim Record of the 5th Meeting, Geneva, November 6, 1958, Executive Office of the President's Office of Science and Technology, RG 359, NA, Washington. On October 25, the president had named a delegation of twenty-five men to assist Wadsworth. This delegation included representatives from the State Department, Atomic Energy Commission, Pentagon, and the President's Science Advisory Committee. See Divine, \textit{Blowing on
In his memoirs, the president suggests that the Soviet Union had no desire to reach an agreement on the basis of the conclusions of the Conference of Experts. It was "obvious" from the beginning of the test ban conference that the Soviets had "no intention of agreeing to a practical control system." In his view, their fear of having international inspection teams within their territory was greater than their wish to reach an accord on testing.

At the time of the conference, the Soviet delegation, led by Semyon Tsarapkin, believed that the American position regarding on-site inspection was intended to prevent progress in the negotiations. From Moscow’s perspective, the American insistence on large numbers of inspection teams was "merely camouflage" designed to hide the fact that the U.S. did not really want to conclude an agreement on testing. The main obstacle in the path of an accord was not the inspection and the control system but the "lack of desire on the part of the United States ... to reach an agreement."

On November 10, Khrushchev increased tensions with the West when he demanded the withdrawal of allied troops from Berlin. He gave the West six months to conclude a German peace treaty; otherwise, the U.S.S.R. would sign a separate peace with East

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147 Ibid.

148 Telegram from Moscow to the British Foreign Office, October 31, 1958, FO371/132688, PRO, Kew.
Germany, giving it the right to govern access to West Berlin. According to William Thompson, Soviet relations with Communist China were partly responsible for this belligerent stance. Beijing had recently criticized the Soviet Union for being too cautious in its support for the Chinese stand against the Americans in the Straits of Formosa. Khrushchev saw the ultimatum over Berlin as a way to refute Chinese accusations of Soviet cowardice. Perhaps even more important, however, was the Soviet Union's genuine desire for a German peace treaty. In Thompson's view, Khrushchev hoped that a treaty would provide the Soviets with western ratification of post-war borders, including the division of Germany. It would also provide an opportunity for the Soviet Union to become a party to agreements limiting West German rearmament. Finally, Khrushchev hoped that the demands over Berlin would force the West to agree to a summit on the German question, for which he had been pressing since early 1958.149

Undoubtedly, Khrushchev's ultimatum must have had a negative impact on the negotiations in Geneva. Certainly, it would have reinforced the Pentagon's view (shared by the AEC) that the Soviet Union was an untrustworthy nation. However, there was not much discussion of the Berlin crisis among the delegates at the Test Ban Talks. Interestingly, the British representatives seemed more suspicious about the tactics being employed by the Americans in the negotiations. On November 10, the head of the

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149 Thompson, Khrushchev: A Political Life, 194-6.
delegation, David Ormsby-Gore, reported to the Foreign Office that the American position, which he regarded as "much too sweeping" and "extremely rigid," raised questions about whether the U.S. was "serious at all" about the negotiations. As a result of such reports, the Foreign Office began to question whether it should continue to side with the Americans at the talks. Although the British too were interested in establishing a reliable control system in the Soviet Union, they thought it unwise to persist in connecting an agreement on testing with other disarmament measures. According to the British Foreign Office, "Our link with the establishment of a control system appears reasonable to the world; our link with real disarmament does not." The British public, press and parliament had begun to criticize the western powers for being inflexible on this point and criticism was also growing stronger in many uncommitted and friendly countries. Consequently, Foreign Secretary Selwyn Lloyd instructed the British embassy in Washington to advise the State Department that he felt "even more strongly than before" that the link between a test ban accord and other steps toward disarmament should be dropped, "not only because of the criticism our present position arouses, but because of the merits of ... 

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151 Summary Analysis of Foreign Office Arguments on the "Link with Real Disarmament," November 21, 1958, FO371/132697, PRO, Kew. In his memoirs, Macmillan argues that "To insist upon the second demand -- progress in disarmament in the conventional field -- seemed not only impolitic but also unnecessary." See Riding the Storm, 568.
Although Lloyd hoped that the Americans would give serious thought to his recommendation, he was not sanguine that their response would be positive. In fact, he informed the British Embassy on November 11 that "For your own information, I am by no means sure whether we, for our part, may not find ourselves obliged to make our position clear in this respect, even if that were to involve parting company with the United States."\textsuperscript{152}

Agreeing with the British perspective, the American delegation in Geneva also advised the State Department to drop the link. James Wadsworth was convinced that this was the only way to make progress in the negotiations. He realized, however, that this course of action would result in a long period of internal debate within the administration.\textsuperscript{153} When the proposal was presented to the administration by the British embassy, it met with immediate opposition from the Atomic Energy Commission and the Defense Department. According to their reasoning, the United States was at a "permanent" strategic disadvantage because it never would be the aggressor in a nuclear war. Since other powers (presumably the Soviet Union) did not share this peaceful worldview, it was essential for the U.S. to develop, among other things, an effective anti-missile missile, which of course, would

\textsuperscript{152} Telegram from the Foreign Office to the British Embassy in Washington, November 11, 1958, FO371/132690, PRO; See also Memo to the Minister of Defence from Selwyn Lloyd, November 18, FO371/132692, PRO, Kew.

\textsuperscript{153} Telegram from the U.K. Delegation in Geneva to the Foreign Office, November 20, 1958, FO371/132692, PRO, Kew.
require a "good deal of further testing." For this reason, the United States should not consider abandoning the link between an agreement to suspend testing and other conditions which would provide for annual progress in "all the fields of disarmament."  

The State Department demurred, responding that it would be impossible to incorporate all of the stiff conditions demanded by these two bureaucracies into an accord. Concerned about the growing world opinion against nuclear testing, the department felt that the administration should at least consider the proposal put forward by the British and the American delegations at Geneva. Again, the President’s Scientific Advisory Committee and its head, James Killian, supported State’s perspective. Convinced that the U.S. was "significantly ahead" in the nuclear weapons field, Killian argued that a test suspension treaty would in itself be to the advantage of the United States. Moreover, he pointed out that the development of effective anti-missile missiles depended almost entirely on the development of suitable vehicles and electronic devices rather than on suitable warheads. In other words, it was misleading for the United States to justify the continuation of its tests with the rationale that they would contribute to the defensive nature of American weaponry. Despite the sound arguments in favour of a separate test ban, the AEC and the Pentagon remained opposed to any such

154 Telegram from Harold Caccia at the British Embassy in Washington to the Foreign Office, November 20, 1958, FO371/132692, PRO, Kew.
agreement with the Soviet Union.\textsuperscript{155}

Of course, Eisenhower had the power to shift the administration in favour of a more conciliatory policy but he chose not to. Unlike the British prime minister, the president was under no public or legislative pressure to reach an accord with the Soviet Union on the testing issue.\textsuperscript{156} As the British ambassador in Washington observed in late November, "there is nothing here which amounts to any political pressure upon the government" to change its position.\textsuperscript{157} The weight of opinion in Congress and in the public at large was "by no means" in support of an agreement to suspend testing. On the contrary, rather than supporting a test ban, it seemed that public and congressional pressure was mounting in the other direction -- in favour of the resumption of testing. Despite the fact that many of the nuclear explosions took place in the United States, and that average fallout figures over the country were considered to be the highest in the world, there was not nearly as much public

\textsuperscript{155} Ibid.

\textsuperscript{156} In February 1958, Gallup asked a cross-section of adults in the U.S. and the U.K.: Do you think that the United States and its Western allies should or should not agree to ban atomic and hydrogen tests for at least two to three years if Russia also agrees? In response, 74 percent of the British answered in the affirmative whereas only 49 percent of Americans did so. In June of the same year, the Americans and British were given the following question in another poll: Do you think the United States should stop making tests with nuclear weapons and H-Bombs or not? In Britain, 62 percent said yes but in the United States only 33 percent agreed. See George Gallup, ed., \textit{The Gallup Poll: Public Opinion, 1935-1971}, (New York, 1972), 2: 1541, 1555.

\textsuperscript{157} Memo from Harold Caccia to the Foreign Office, November 21, 1958, FO371/132692, PRO, Kew.
apprehension about the tests in the U.S. as there was in other
nations such as the U.K. and Japan. Even when "Hardtack II"
resulted in a sharp rise in radioactivity over Los Angeles, the
British ambassador noted that the "London Daily Express made more
of the matter than did the U.S. papers and it appeared to have
been generally forgotten in a couple of days."158

If public opinion did not spur Eisenhower to revise the
traditional U.S. position on testing in the fall of 1958, neither
did the Democrats on Capitol Hill, who controlled both houses of
Congress. Domestic opinion probably explains why the Democratic
Party had not taken a stand on testing since Adlai Stevenson’s
failed attempt to make it an issue in the 1956 presidential
election campaign. On November 17, 1958, Tennessee Democratic
Senator Albert Gore suggested that the United States might gain
the propaganda advantage by suspending tests in the atmosphere.
Based on his experience in Geneva for a few days as a
Congressional observer, he recommended that the president propose
a limited, three year ban on tests in the atmosphere, combined
with the resumption of tests underground and in outer space.159
Gore emphasized that his idea be considered as one way of dealing
with world public opinion, rather than as a substantive proposal

158 Telegram from Harold Caccia at the British Embassy in
Washington to the Foreign Office, November 20, 1958,
FO371/132692, PRO; See also Top Secret Telegram from Harold
Caccia at the British Embassy in Washington to the Foreign
Office, November 12, 1958, FO371/132699, PRO, Kew.

159 Memo for the Record, November 18, Diary Series, AWF,
DDEL; Memo from Senator Albert Gore to the President, November
19, 1958, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL,
Ailene.
to be made during the negotiations.\textsuperscript{160} Like many of Eisenhower's own advisors, the senator opposed concessions to the Soviet Union. "I believe no agreement at all," he wrote, "would be preferable to one which might seriously compromise the security of the U.S."\textsuperscript{161}

The president evinced interest in Gore's suggestion, as did other members of the administration.\textsuperscript{162} Various bureaucracies, including the State Department, had already been contemplating what to do if the Geneva negotiations remained deadlocked or broke down completely. According to the British embassy, it was clear that the American administration would want to restart testing right away if this happened.\textsuperscript{163} Recently, John McCone had publicly declared that the AEC was ready to resume testing "at a moment's notice."\textsuperscript{164} Nevertheless, if the talks did collapse, the Americans would not want the rest of the world to think that they had simply gone back to their original position and continued testing as if the negotiations had never taken place. Instead,
they preferred, according to the British Embassy, "to find some compromise solution which would leave them in a better posture as regards world public opinion."\(^{165}\)

Although Gore’s suggestion was not adopted immediately, it would continue to have appeal in the administration. Like McCone’s earlier proposal, Gore’s so-called "compromise" was attractive because it lacked real substance: it would improve the American image in the world while allowing the U.S. to resume testing. The Soviets saw through this proposal, however. After its publication in the *New York Herald Tribune*, the Russian delegation at Geneva described it as more evidence of "U.S. bad faith in the negotiations."\(^{166}\)

In late November, the Soviet Union also mounted a heavy attack on the Western powers’ position regarding the link between disarmament and an agreement on testing. As a result of this offensive, the American delegation began to press harder for a change in Washington’s policy. On the grounds that this policy was increasingly indefensible at Geneva, they repeated their recommendation to the State Department to eliminate the link.\(^{167}\)

The U.S. delegation found an ally in the British government. Requests for assistance by the U.K. delegates in Geneva, along with growing criticism from the public and the

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\(^{165}\) Letter from Harold Caccia at the British Embassy in Washington to the Foreign Office, November 21, 1958, FO371/132693, PRO, Kew.

\(^{166}\) Ibid.

\(^{167}\) Telegram from U.K. Delegation at Geneva to Foreign Office, November 22, 1958, FO371/132692, PRO, Kew.
Opposition in Britain, led the Foreign Office to make a direct plea to the State Department. Understanding the need to "avoid antagonizing Dulles," Lloyd sent a carefully worded letter to the secretary of state proposing that the United States join with Britain in announcing their willingness to abandon the link between testing and other measures of disarmament. Like their delegation in Geneva, the foreign secretary and prime minister believed strongly that this was now the "best course to adopt." According to Lloyd, the only way to make progress on disarmament was to get an agreement on testing, establish a control system and thus "break the ice" with the Russians. Even if the conference eventually failed, a more conciliatory posture would improve the image of the U.S. and the U.K. in the world. Recognizing that the Eisenhower administration did not face the same domestic problems, the foreign secretary emphasized to Dulles that in the U.K., "the public difficulties on this point ... are very great."169

The British proposal met with some initial resistance in the State Department. Philip Farley, Dulles' special assistant, did not believe that the United States should abandon the link at this stage of the negotiations since any change in policy now

168 Telegram from the Foreign Office to the British Embassy in Washington, November 22, 1958, FO371/132692, PRO; See also Telegram from the U.K. Delegation in Geneva to the Foreign Office, November 24, 1958, FO371/132693, PRO, Kew.

169 Letter from Foreign Secretary Selwyn Lloyd to Secretary Dulles, November 25, 1958, FO371/132693, PRO, Kew.
might "make the U.S. Administration look silly." Although he gave no official answer at this time, the secretary of state's informal response was more encouraging. From the embassy in Washington, Harold Caccia reported that Dulles was "personally disposed" to agree with Selwyn Lloyd's suggestion. Although his staff had recommended that the United States not drop the link at this time, the secretary of state preferred to adopt without delay the position outlined by the British. Nevertheless, he still had to convince his own department that this was the right course to pursue, as well as the other bureaucracies, and of course, the president.  

Dulles had to put off his discussion with these agencies and Eisenhower when he became ill with cancer and entered the hospital during the first week of December. While hospitalized, the American position in Geneva became even more difficult to sustain as the Soviets became more flexible on the issue of control. On December 7, David Ormsby-Gore, the head of the British delegation, reported that "Russian concessions are

170 Telegram from Harold Caccia in Washington to the Foreign Office, November 22, 1958, FO371/132692, PRO, Kew.

171 Telegram from Washington to Foreign Office, November 27, 1958, FO371/132693, PRO, Kew.

172 Dulles had undergone surgery to remove abdominal cancer growths in 1956. See Divine, Blowing on the Wind, 242-3. While he was in the hospital, the Secretary of State and his Assistant Secretary, Christian Herter, agreed that the president was more likely to be persuaded by the British proposal if it was left to Dulles to raise the matter with him once he had been released from hospital. See Telegram from Harold Caccia in Washington to the Foreign Office, December 10, 1958, FO371/132695, PRO, Kew.
now falling about us thick and fast." Most importantly, the Soviets had accepted the western demand that the basic provisions of a control system should be incorporated into the actual text of an agreement to suspend testing. Seeing this as a significant concession, many in the State Department now became convinced that the time was right for the United States to shift its position, perhaps by dropping the link between test suspension and disarmament. At the same time, however, the department realized that the defense bureaucracies would be solidly opposed to this concession.

Because the president failed to put pressure on these agencies to change their intransigent position, the State Department was unable to give the U.S. delegation any new instructions, making it extremely difficult for both the American and the British delegates to carry on with the negotiations in Geneva. According to David Ormsby-Gore, the U.K. delegation was trying to do its "best to keep in step with the Americans, but it is somewhat difficult when their delegation seems to have little authority (every word is referred back to Washington), a minimum

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175 Telegram from Harold Caccia in Washington to the Foreign Office, December 9, 1958, FO371/132695, PRO, Kew.

176 Briefing Note, December 9, 1958, RG 273, Records of the NSC, OCB 000.9, NA, Washington.
of flexibility, and still no firm agreement on their fundamental position." Since the Soviet Union was gaining the advantage in terms of world opinion, the head of the British delegation asked the Foreign Office to try to inject "some sense of urgency ... into the Washington machine.""  

Upon his release from the hospital in the second week of December, Dulles asked Eisenhower to consider eliminating the link between disarmament and testing in order to break the impasse in the negotiations. But the president refused to make a decision on this issue until the AEC and DOD had "had a chance to state their case." Instead of becoming more flexible, these agencies decided to place more obstacles in the path of the negotiations. On December 9, the State Department learned that the Department of Defense was having second thoughts about the conclusions reached in August by the scientists at the Geneva Conference of Experts. Based on their recent analysis of the seismic data derived from "Hardtack," the Atomic Energy Commission now contended that it would be more difficult than previously expected to distinguish between earthquakes and underground nuclear explosions, making the "detection of clandestine tests far less likely." Based on this "new data," the Department of Defense now contended that the only way to


178 Ibid.

179 Telegram from Secretary of State to the Foreign Office, December 16, 1958, FO371/132696, PRO, Kew.
determine whether events were nuclear explosions or earthquakes would be to station a much larger number of mobile, on-site inspection teams inside the Soviet Union.  

The President's Scientific Advisory Committee found fault with the Defense Department's conclusions. Although they concurred that the new data warranted consideration, the PSAC did not believe that it should present a serious obstacle in the negotiations. Meeting with the president, Hans Bethe explained that although it was "impossible to have an inspection system that will inspect every conceivable test," it was possible to have a good, effective, detection system with the available technology, especially with regards to the large tests (above 5 kilotons). Such an adequate system would not require the large number of inspections insisted upon by the Department of Defense. Furthermore, an agreement on testing would not pose a risk to national security since it would freeze the American superiority in nuclear weapons. In the absence of an accord, the Soviets would reach parity by approximately 1965. Despite the new seismic data, the PSAC concluded that it was still in the U.S. interest to support an agreement on testing since this would represent "a step towards arms stability." In addition, the

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180 OCB Briefing Note, December 9, 1958, RG 273, Records of the NSC, File 000.9, NA, Washington; Memo for Donald Quarles, Department of Defense, December 9, 1958, Series I, Subseries B, WHOSAST, DDEL, Abilene.

committee did not think that the United States should insist on including an escape clause in an agreement which would allow it to test small bombs for "peaceful" purposes. They also opposed any proposal which would ban atmospheric explosions but allow underground testing, recognizing that this would be "strictly a propaganda step."\textsuperscript{182}

In response to the arguments made by the PSAC, the president underlined the need for the U.S. to exert leadership by ensuring that the "Free World" was provided with "maximum strength."\textsuperscript{183} In Eisenhower's view, the AEC's analysis of the new data had to be taken very seriously since it had resulted in a "drastic change in the structure of fact." Accordingly, he agreed with the DOD that new information should be introduced at Geneva, even if this meant risking a complete breakdown in the talks. As his memoirs attest, this decision "threw a pall on the conference at Geneva."\textsuperscript{184} The Soviets became more convinced than ever that the U.S. was deliberately creating obstructions in the negotiations in the hope that the talks would collapse and the American testing program could restart.\textsuperscript{185} The British were also wary about the American findings. Prime Minister Macmillan, who was very suspicious about the "new data" introduced by the AEC, anticipated that it would be very hard to convince public opinion

\textsuperscript{182} Memo re: Major Conclusions of the PSAC Meeting, November 21, 1958, Series I, WHOSAST, DDEL, Abilene.

\textsuperscript{183} Ibid.

\textsuperscript{184} Eisenhower, \textit{Waging Peace}, 479.

\textsuperscript{185} Appleby, "Eisenhower and Arms Control," 300.
in the U.K. and elsewhere that this was a "genuine development."\textsuperscript{186}

Some historians argue that the president's deep commitment to a test ban resulted in a change in the American position on testing in 1958. According to Appleby, Eisenhower "pressed ahead" in favour of a test ban treaty despite the "lack of consensus" in his administration.\textsuperscript{187} Hewlett and Holl believe that the president, who had a "moral commitment to a nuclear test ban," viewed the American moratorium as "a major milestone on the road toward international control of atomic energy first mapped out in his Atoms-for-Peace speech in December of 1953."\textsuperscript{188} Similarly, Divine suggests that "Eisenhower remained the key actor in the drama ... In his own characteristically indirect way, he had presided over the change from viewing the test ban as purely a Soviet propaganda ploy to accepting it as a logical step toward genuine nuclear disarmament."\textsuperscript{189}

Unfortunately, it is difficult to find convincing evidence for these flattering interpretations. Despite the voluntary moratorium in 1958, there was no significant shift in the

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\textsuperscript{186} Letter to the Foreign Office from Frederick Brundrett at Whitehall, December 22, 1958, FO371/132697, PRO, Kew.
\textsuperscript{187} Appleby, "Eisenhower and Arms Control," 261.
\textsuperscript{188} Hewlett and Holl, \textit{Atoms for Peace and War}, 546.
\textsuperscript{189} Divine, \textit{Blowing on the Wind}, 231. Elsewhere, Divine argues that the president was willing to take "a dangerous gamble with American security" in the hopes that "a test ban treaty would be the first step toward a comprehensive disarmament agreement." See Divine, \textit{Eisenhower and the Cold War}, 131.
\end{flushright}
administration's position on testing. At the end of the year, the official American policy remained fundamentally the same as it had always been: any accord on testing would have to be linked to comprehensive disarmament. Although the voluntary moratorium remained in effect, there was no hope of a negotiated agreement on testing. For his part, the president might have wanted to bring the arms race under control, but he did not take any actions or make any decisions which resulted in any significant change in the American policy on disarmament or nuclear testing. Despite strong international pressure in favour of an accord, combined with specific requests for more flexibility from the British Foreign Office and his own State Department, Eisenhower was unwilling to make any concessions to the Soviet Union which would have required a shift in the U.S. position. Knowing that the majority of the American public opposed a halt to testing, he stalled on the question of removing the link between a test ban and other disarmament measures and continued to favour the arguments of the AEC and DOD over those of the State Department and the PSAC. On December 18, the talks in Geneva recessed, with very little accomplished. As the New York Times editorialized, "Another effort to make the world a safer place to live ... has

190 In June 1958, when Gallup asked Americans: "Do you think the U.S. should stop making tests with nuclear weapons and H-Bombs or not?" fifty-eight percent answered "should not," thirty-three percent "should," and nine percent had "no opinion." In contrast, ninety percent in India, seventy-one percent in France and sixty-two percent in Great Britain responded that the U.S. "should" stop making tests. See George Gallup, ed., The Gallup Poll: Public Opinion, 1935-1971 (New York, 1972), II: 1555.
come to naught." Although the Soviet Union had gained the propaganda advantage by making important concessions at Geneva, the American position remained unbending. President Eisenhower had the authority to alter the course of events, but he chose not to do so.

191 Quoted in Ball, *Justice Downwind*, 82.
Chapter 10

DEADLOCK

Throughout 1959, the Nuclear Test Ban negotiations remained deadlocked. Although delegates from the United States, Britain and the Soviet Union continued to participate in the negotiations, not much was accomplished. Some historians contend that Soviet intransigence was primarily responsible for the lack of progress in Geneva. "Faced with the inflexible stance of the Russians in the Geneva negotiations," the Eisenhower administration, according to Richard Hewlett and Jack Holl, began to modify its position "in order to improve chances of reaching an agreement with the Soviet Union."¹ In his dissertation, Charles Appleby argues that the "ultimate goal of U.S. policy" during this period "remained the pursuit of a comprehensive [test] ban." The president, in particular, was deeply committed to achieving an agreement in Geneva as a way of slowing down the arms race and reaching a détente with the Soviet Union.² Similarly, Robert Divine contends that Eisenhower "refused to give up the quest for a test ban" during these negotiations. The American president was "genuinely desirous of signing a test ban treaty as a first

¹ Richard Hewlett and Jack Holl, Atoms for Peace and War, 1953-61 (Berkeley, 1989), 551.
A closer examination of American policy during these negotiations results in a less favourable interpretation of the president's role. During the year, Eisenhower was under a lot of pressure to change the American position. Reinforced by world opinion, the U.S.S.R. and the U.K. continued to seek a comprehensive agreement on nuclear tests. Within the U.S. administration, the State Department, the Central Intelligence Agency and the President's Science Advisory Committee encouraged this goal. Although Eisenhower made several public statements indicating his desire to slow down the arms race by reaching an accord at Geneva, he remained unwilling to make any significant change in the American policy on testing during this period. As before, he gave more support to the Department of Defence and the Atomic Energy Commission as they waged a successful rearguard action against any test ban treaty with the Russians.

In 1959, countries such as Japan and India continued to hope that the United States would sign an accord with the other nuclear powers to end testing permanently. During the year, the United States also received criticism for its nuclear testing policies from other parts of the world. Much of this criticism came from South Africa and Britain, after the U.S. admitted that

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it had carried out Project "Argus," a series of secret, high altitude, nuclear tests in the South Atlantic the previous September. The Pentagon and the Atomic Energy Commission reluctantly agreed to make a statement regarding these tests after they had been disclosed in a *New York Times* article. As explained by these defense bureaucracies, the purpose of this series had been to determine whether it was possible to create a "nuclear shield" to defend against atomic missiles. However, the tests had not been conclusive and many doubts had been raised (in the U.K. and elsewhere) about the feasibility of developing a defense against nuclear weapons. The people of South Africa were particularly unimpressed when they learned that this series had been carried out so close to them. In an editorial entitled "Reckless," the *Cape Times* sharply admonished the American government for risking the health of its people for the "sake of a highly dubious advantage." Practically "everybody on earth" realized, according to the paper, that it was impossible to develop a perfect defense against outside threats. Although it refused to release any exact figures, the U.S. claimed that the tests had not resulted in any fallout hazard because they were carried out at such high altitude. A number of atomic "devices" had been exploded but these had "small yields" of "less than several kilotons." This information did not reassure the South Africans. They had not been warned about "Argus," and if an

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5 The public statement was made in Washington on March 19, 1959. Telegram from the American Embassy in London (Barbour) to the Secretary of State, March 20, 1959, DS RG 59, 711.5611/3-2059, NA, Washington.
accident had occurred, those living nearby might have been exposed to dangerous levels of radioactivity. From their perspective, the American authorities had "gambled with the lives of a lot of people; and those people resented it keenly."

During a press conference on March 25, the president had to field some difficult questions regarding the delay in the announcement and the purpose of the "Argus" project. Perhaps in an attempt to deflect the questions, Eisenhower responded with a rather vague and incoherent answer: "Well, ... the purpose had to do both with the International Geophysical Year and ... also certain security aspects ... only now has the -- my scientific people separated out from the IGY info, which we are obligated to make public to the world, and those things which have a potential military value." Presumably, this garbled statement failed to reassure the already critical South Africans.

American testing also resulted in deep concern in the Philippines. Scientists there reported the presence of a type of radioactive fallout identified as Cesium 137, an element believed to have been produced by the "Hardtack" explosions in the Pacific. The Philippine embassy asked the State Department to provide instruments to help the scientists determine the extent

6 Telegram from William P. Maddox, Chargé d'Affaires, American Embassy in Cape Town, to State Department, March 20, 1959, DSRG 59, 711.5611/3-2059, NA; Telegram from the State Department to the American Embassy in Cape Town, March 27, 1959, DSRG 59, 711.5611/3-2559, NA, Washington.

7 Extract from Press Conference from the British Embassy in Washington to the Foreign Office, March 25, 1959, FO371/140436, PRO. This extract was accompanied by a note which stated "Make what you can of it!"
of the danger. People in the Philippines were very worried because they had learned that Cesium 137 had the potential to cause genetic defects.  

Throughout 1959, the government of Mexico protested the Atomic Energy Commission's plan to dump radioactive waste in the Gulf of Mexico. In January, the embassy of Mexico began to ask the State Department some important questions. What radioactive materials would be dumped in these waters? How much radioactivity would there be? Would marine life be affected? Responding in a rather indefinite manner, the AEC stated that it "was impossible to state what these [radioactive materials] might be." They might include cobalt, phosphorous or "any other material, including strontium 90," the dangerous radioisotope produced by nuclear tests. Although the AEC refused to estimate the amount of radiation involved, it gave assurances that the amounts would be small and that the disposal operation would be "reasonably safe." The government of Mexico was not satisfied with these assurances, especially when they learned from a Washington Post article that American scientists had recommended that a careful study be carried out prior to the disposal of any radioactive waste because of the potential danger to marine life in the Gulf. Even Congressmen from the Gulf Coast areas of Texas had urged their government to come up with better guarantees that the waste would not have damaging effects. In Mexico, public

8 Memo from Eduardo José Montilla, Assistant Attaché of the Embassy of the Philippines, Washington, to the State Department, January 21, 1959, DSRG 59, 711.5611/1-2159, NA, Washington.
opinion was clearly opposed to the AEC's plans. Mexicans were concerned about the impact of radiation on their shrimp and fishing industry as well as their own health and well-being. Published comments were very critical of the American choice for a site. Hoy Magazine suggested that, "If the radioactive waste matter which the U.S. proposes to dump into the Gulf of Mexico is not dangerous, then let the U.S. dump it into the Hudson River or into any body of water off its coasts." Expressing its official "inconformity" with the AEC's plan, the government of Mexico asked the U.S. to consider dumping its radioactive material into the Atlantic or Pacific oceans rather than into the Gulf. Apparently, Mexican officials did not realize that the AEC had already, according to its own records, disposed of radioactive waste in the "Pacific and Atlantic oceans and once in the Gulf of Mexico off the coast of Florida." The State Department thought it unwise to inform the Mexican government that radioactive material had already been dumped in the Gulf, but officials in the department did begin to argue against disposing of any more waste there. Under Secretary of State Roy Rubottom warned that the disposal plan might seriously impair American relations with Mexico. In his view, it was legitimate for the Mexican government to reject the plan as an "arbitrary act" by the United States. Furthermore, it would be difficult for the U.S. to explain to world opinion how it had "unilaterally, and without the concurrence of Mexico," selected such a site, "particularly as so little can be known with certainty regarding the possible adverse effects oceanic waste disposal might have over a long
period of time." Despite this opposition -- from the Mexican government and the State Department -- the AEC granted the license to dump this waste to the Coastwise Marine Disposal Corporation in the summer of 1959.9

The American position on testing also continued to cause friction with the Soviet Union and Britain. In early January 1959, during the recess in the nuclear test ban negotiations, the United States passed the new seismic data from the "Hardtack II" series to the Russian delegates in Geneva.10 The immediate reaction of the Soviet delegation was to oppose the introduction of new technical information into the conference. According to the Russians, the 1958 Geneva Conference of Experts had already established the number of control posts necessary for a treaty and they did not intend to increase these figures now. Like the British, the Soviet delegates were highly suspicious of U.S.

9 Memo of Conversation, State Department, December 17, 1958, DSRG 59, 711.5611/12-1758, NA; Memo of Conversation, Department of State, January 19, 1959, DSRG 59, 711.5611/1-1959, NA; Memo of Conversation, Department of State, March 26, DSRG 59, 711.5611/3-2659, NA; Memo from the State Department (based on a memo produced by the AEC) to Antonio Carrillo Flores, Ambassador of Mexico, April 16, 1959, DSRG 59, 711.5611/2-2759, NA; Memo of Conversation, Department of State, May 6, 1959, DSRG 59, 711.5611/5-659, NA; Memo of Telephone Conversation, Department of State, June 1, 1959, DSRG 59, 711.5611/6-1559, NA; Telegram from American Embassy in Mexico City to the Secretary of State, June 15, 1959, DSRG 59, 711.5611/6-1559, NA; Telegram from American Embassy in Mexico City to Secretary of State, July 30, 1959, DSRG 59, 711.5611/7-2959, NA; Memo of Conversation, Department of State, November 2, 1959, DSRG 59, 711.5611/11-259, NA; Memo from Roy Rubottom, State Department, to John McCone, AEC, November 18, 1959; DSRG 59, 711.5611/6-1559, NA; Memo of Conversation, Department of State, December 17, 1959, DSRG 59, 711.5611/12-1759, NA, Washington.

10 The U.S. had given the data to the British, earlier, in late December, 1958.
motivations. In their view, the submission of this new information represented further evidence of the American unwillingness to reach an agreement.11

Despite American recalcitrance, the Soviet Union and Great Britain continued to seek an accord with the United States throughout 1959. Early in the year, Khrushchev began to retreat from his demands over Berlin. He also made further concessions in Geneva. As before, economic concerns, coupled with worries about the proliferation of nuclear weapons to countries such as China and West Germany, seem to have motivated Khrushchev to improve relations and achieve an agreement with the West. An accord to stop testing would mean that the Soviets could divert resources from the military to promote economic growth.12

Still feeling the heat from domestic opinion, the British also made a concerted effort to reduce the tension between the Soviet Union and the Western powers in 1959. According to Macmillan, concerns about Germany and European security drove this effort.13 Like the Soviet Union, the U.K. was worried about the dangers posed by the proliferation of nuclear weapons. The Foreign Office believed that a comprehensive test ban agreement

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11 Memo from Spurgeon Keeny to James Killian, January 5, 1959, Series I, Subseries B, WHOSAT, DDEL, Abilene; See also Telegram from the U.K. Delegation at Geneva to the Foreign Office, January 14, 1959, FO371/140446, PRO, Kew.


13 Macmillan, Riding the Storm, 593, 597, 609, 618.
would not only reduce this danger but also improve relations between East and West."

In order to break the impasse at Geneva, the British Foreign Office continued to press the United States to make a concession. Specifically, it repeated the recommendation made in 1958 that the U.S. and the U.K. agree to drop the link between a test ban and general disarmament. The prime minister hoped that the American people (like the British) might support this concession. Harold Caccia, the British ambassador in Washington, was not sanguine about this possibility, however. He detected no pressure from the American public on the U.S. government to alter its position. Since the Atomic Energy Commission and the Defense Department resisted any change in policy, the ambassador urged Macmillan to send a personal message to the president.15

In his letter, the prime minister emphasized the importance of reaching an accord when the nuclear tests conference resumed at Geneva in mid-January. "I have been convinced for some time," he stated, that "we should drop the link with real disarmament." By abandoning this link, which was "a vague formula anyway, impossible to define precisely," the Western powers would improve their image in the world and make an agreement with the Soviets more likely. On the other hand, if the U.S. and the U.K. insisted on this condition, they would lose


the chance of achieving an accord, resulting eventually in "an alarming increase in the number of nuclear powers." 16

During a meeting with the president on January 12, Secretary Dulles supported the British recommendation to drop the link. If the West did not make a concession on this issue, the State Department believed that the Soviets would have a legitimate reason to blame the breakdown of the negotiations on the U.S. Secretary of Defense McElroy opposed this proposal, explaining that the DOD and JCS had "always been reluctant to stop testing." Concerned about the reputation of the U.S. in the world, the president finally began to shift in favour of the State Department, arguing that it would be better if the Soviets broke off the talks because of the American position on the control system, "the real heart of the matter," rather than on the issue of the link. 17 Departing from traditional policy, Eisenhower indicated in his reply to Macmillan that the United States was prepared to drop its insistence on tying an agreement on testing to general progress in disarmament. This concession did not mean, however, that the president was now committed to achieving an accord with the U.S.S.R. From his perspective, it was unlikely that the Russians would ever accept the kind of control system desired by the U.S. Nevertheless, he agreed with the

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16 Telegram from Prime Minister Macmillan to the President, January 1, 1959, FO371/140433, PRO, Kew.

17 Memo of Conversation with the President, January 12, 1959, Diary Series, AWF, DDEL. The president had made a similar argument the previous week when he suggested that he was considering abandoning the link "in order to keep the focus on valid inspection." See Memo of Conversation with the President, January 5, 1959, Diary Series, AWF, DDEL, Abilene.
prime minister that abandoning the link would improve the Western public posture.  

The conference in Geneva resumed on January 14. A few days later, the American and British delegates informed the Soviets that the West was prepared to drop the link with real disarmament. At first, this move appeared to be a significant breakthrough which would allow the negotiations to move forward. Representatives from the U.S. and U.K. began to draft nuclear test ban treaties for discussion in Geneva. The British soon became disillusioned, however, when they learned that Eisenhower had had to cut a deal with the Pentagon and the AEC in order to get them to agree to the concession. In the first draft treaty produced by the Americans, a "duration article" appeared which allowed for the unilateral withdrawal of any party which decided that the control system was not operating properly. When the British queried the State Department about this new provision, Dulles informed them that it had been introduced at the insistence of the Secretary of Defense and the Joint Chiefs of Staff, and the president had agreed to it as the "price of unanimity."  

As a result of this new article, both the British and American delegates were pessimistic about the possibility of

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19 Memo of Meeting, January 16, 1959, OCB RG 273, File 000.9, DDEL, Abilene.

making any progress in the negotiations. From Geneva, the U.K. Delegation reported that they were having "real difficulties" with the duration article, "a pretty high price for agreeing to drop the link." The British delegates had always understood the Western position to be that they would stop testing on the condition that an effective system was devised and that it was installed as quickly as possible on an agreed timetable. A treaty would be drawn up which would spell out the details of the control organization in such a way that the Western powers could feel reasonably certain that the obligation to stop testing was being honoured. This being so, the West would only feel entitled to withdraw from their obligations if the Soviet Union breached the provisions of the treaty. But now, it appeared that the American position was substantially different. The U.S. now wanted to have the right to withdraw from a treaty, not only on the grounds of there having been a violation of its provisions, but on the more open-ended grounds that it did not consider the control organisation to be operating satisfactorily.21

The British delegation had major reservations about the new American position. First, they pointed out that the decision to withdraw would be based on a "purely subjective judgement." Secondly, they were certain that the article would be totally unacceptable to the Soviet Union, since it gave the U.S. the "unilateral right to withdraw from their obligation to stop testing ... by simply stating that they, the Americans, do not

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think that the [control] organization is working satisfactorily." Finally, the U.K. delegation feared that if the Russians did break off the negotiations because of this new provision, the West would have an "overwhelming case to put before world opinion." Moreover, if the British government decided to support the Americans in their approach, this would result in an "almost impossible position politically." 22

James Wadsworth, the head U.S. negotiator, agreed with the British perspective, which he viewed as being "more realistic" than the American. Indeed, during a conversation with the U.K. delegation, he conveyed his opinion that the latest position of his own government was "so obviously unacceptable to the Russians as to constitute a more formidable obstacle to progress in the negotiations than the insistence on the link with disarmament." Despite the major flaws in the new American position, Wadsworth held out no hope that his delegation would be able to bring about a change in the administration's decision. In fact, he was so pessimistic that he suggested that "our only hope might be to allow the Russians to expose the weakness of the U.S. case." 23

On January 26, the Foreign Office received more bad news from its delegation in Geneva. David Ormsby-Gore, the chief British negotiator, reported that he had just had a private talk with Wadsworth which confirmed his "worst fears." In a frank manner, Wadsworth had explained that there were influential

22 Ibid.

elements in the American administration, led by the Pentagon, who had decided not to support "any treaty" to stop tests. Because they disapproved of the decision to drop the link, they had "dug in their toes" on the duration article. Even more disturbing, the opponents of a treaty, the Defense Department and the Atomic Energy Commission, were urging the administration to resume testing as soon as possible. As a result, the State Department felt it had no choice but to demand that the new American position regarding duration be tabled in the negotiations, despite the certainty that the Russians would "react badly." Disapproving of this strategy, Ormsby-Gore told the American delegates that "an operation which entails going into battle with an obviously exposed flank will be extremely difficult to execute."24

Because of the pressure in the administration to resume testing, the American delegation informed the British negotiators (in confidence) that they had also started to work on a draft treaty providing for the discontinuance of atmospheric tests only.25 Although the U.S. delegation did not actually favour such a proposal, nor did the State Department, it was gaining support in some official quarters in Washington. As a result of the propaganda efforts of the AEC and DOD, working closely with the OCB and USIA, very strong public feeling had begun to emerge

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regarding the importance of an effective control system. There was a growing concern in the American public and Congress that an accord might be reached with the Russians based on an inadequate detection system. Many influential congressmen had come to believe that it was dangerous for the United States to negotiate any treaty which would prevent underground explosions. Because of this political mood, the United States Information Agency recommended that the delegates in Geneva announce in the near future that the U.S. was considering an agreement which would apply only to atmospheric tests. According to the reasoning of the USIA, an atmospheric ban would have more appeal than a comprehensive treaty because it required a much less extensive control system.

In this political climate, it was relatively easy for the DOD and AEC to make a case for the resumption of underground "experiments." In an effort to "eliminate the fall-out issue," and "demonstrate our good faith in the entire matter," John McCone encouraged the administration to support the recommendation made by the USIA in favour of an atmospheric ban. He also went a little further, arguing that a series of underground tests be conducted "as soon as possible" in order to

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26 Telegram from the Foreign Office to the U.K. Delegation in Geneva re: Conversation with Secretary Dulles, February 6, 1959, F0371/140435, PRO, Kew.

27 Memo from George Allen, United States Information Agency, to James Killian, January 19, 1959, Series I, Subseries B, WHOSAT, DDEL, Abilene.
develop a watertight control system.\textsuperscript{28} The commission needed at least three years of experimentation to determine whether an effective system for monitoring underground tests could be devised. Although the Defense Department supported McCone, the PSAC and the State Department had serious reservations about the AEC's proposal. Hans Bethe pointed out that a fraud-proof control system was both impossible and unnecessary. In his view, the probability of detection remained so high that "neither the Russians nor anyone else could well accept the risk of being caught cheating."\textsuperscript{29} James Killian agreed, emphasizing that an absolute and fool-proof control system "could never be designed." In his opinion, a less than perfect system would serve as an effective deterrent against possible cheating. In fact, he thought that it was "very likely that the Geneva system [devised by the experts] as it stood prior to the HARDTACK data would have been sufficent as a deterrent to any future testing."\textsuperscript{30}

The State Department was mainly concerned about the effect that the AEC's proposal would have on the negotiations in Geneva. Special Assistant Philip Farley worried that it might appear that the United States was trying to create rather than resolve

\begin{itemize}
\item \textsuperscript{28} Letter from John McCone to James Killian, January 17, 1959, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL; See also Memo of Meeting with the President, January 29, 1959, Special Assistants Series, Presidential Subseries, WHOSANSA, DDEL, Abilene.
\item \textsuperscript{29} Memo from Spurgeon Keeney to Gordon Gray, January 27, 1959, NSC Series, Briefing Notes Subseries, WHOSAST, DDEL, Abilene.
\item \textsuperscript{30} Memo of Conversation, January 26, 1959, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.
\end{itemize}
difficulties in the negotiations. The secretary of state was very much opposed to any immediate alteration in the American policy on testing. Because Dulles "definitely wanted some agreement to emerge," he recommended consideration of the atmospheric ban only as a fall-back position, to be used if the attempts to reach a more comprehensive accord failed.31

According to some historians, such as Divine and Appleby, the president always preferred a comprehensive test ban.32 During several meetings in early 1959, however, Eisenhower indicated that he actually favoured the more limited scheme -- which would prohibit atmospheric tests but "allow underground tests up to ten kilotons."33

In February, Eisenhower's actions raised doubts about whether he was committed to reaching any type of agreement in Geneva. Concerned that the Soviet Union would not accept a satisfactory control and inspection system, the president and his advisors instructed the delegates in Geneva to try to break off the talks. Although the State Department had serious reservations regarding the international political implications of this decision, the administration believed that it would find support in the U.S., given the attitude of Congress and the

31 Ibid. See also Telegram from Harold Caccia at the British Embassy in Washington, to the Foreign Office, February 2, 1959, FO371/140435, PRO, Kew.


33 Memo of Conversation with the President, January 12, 1959, Diary Series, AWF, DDEL; See also Memo of Conversation with the President, February 25, 1959, Diary Series, AWF, DDEL, Abilene.
American public, the majority of whom were against reaching an accord with the Russians. Because he worried that voluntary unilateral disengagement would be extremely difficult to explain to the rest of the world, the president suggested that "we should not tell anyone that we are preparing to pull out." Instead, the U.S. should blame the breakdown of the conference on Soviet intransigence. If that did not work, the American delegation would then be instructed to offer the proposal regarding atmospheric tests. Because it knew that the British continued to favour a comprehensive test ban agreement, the administration decided not to inform Macmillan of its plans.

This decision demonstrated the limits of the Anglo-American "special relationship." It also put the U.S. delegates in Geneva in an extremely difficult situation. According to Charles Stelle, the Senior State Department Advisor at the conference, it was a "most unpleasant experience" for the U.S. delegates to receive instructions not only to break off the negotiations, but to also conceal this decision from the British. Although the U.K. was kept in the dark about these plans, the British representatives soon realized that the American delegates no longer seemed motivated to reach an agreement with the Soviets.

34 Secret Memo from David Ormsby-Gore to the Head of the Atomic Energy and Disarmament Department, July 4, 1960, FO371/14923, PRO, Kew.

35 Memo of Conversation with the President, February 17, 1959, Diary Series, AWF, DDEL, Abilene. See also Ambrose, *Eisenhower: The President*, 522.

36 Memo of Conversation with the President, February 17, 1959, Diary Series, AWF, DDEL, Abilene.
According to Michael Wright, the Scientific Advisor to the U.K. Delegation in Geneva, "we became ... increasingly conscious at the time of the reserve and virtual obstruction on the part of the U.S. delegation, but we could only guess at their reasons."  

On February 10, David Ormsby-Gore reported to the Foreign Office from Geneva that "the situation here is thoroughly unsatisfactory and the morale of the American delegation is low." The talks had stalled. Washington was not providing its delegates with any new negotiating tactics, and there was a great danger that the Americans were attempting to "torpedo this conference." Although delegates like Wadsworth had tried in the past to negotiate in good faith, it now appeared that the Americans, under pressure from their military experts, were about to "throw away the chance of a reasonable agreement." Worried that such a development would leave the British in a very serious and unfavourable public position, Ormsby-Gore warned the Foreign Office not to allow the military bureaucracies in either Washington or London to dictate its policies. It was "axiomatic" that the military advisers in all countries (including the Soviet Union) would put forward the strongest case possible for increased expenditure on arms. It was "not axiomatic," however, for "governments to regard an ever greater acceleration of weapon development as natural and make no attempt to call a halt to such

In his view, an agreement banning nuclear explosions was in the interest of the U.K. Such an accord would benefit the country in three ways. First, it would prevent the problem of "4th, 5th, and 6th countries" starting their own nuclear weapons programs. Secondly, an agreement would open up the possibility of progress in general disarmament. Thirdly, it would improve the international political atmosphere thus reducing the pressure for an arms race. Based on his own experience, Ormsby-Gore believed that the Soviet Union would be receptive to a reasonable control and inspection system. Furthermore, once the Russians accepted a treaty to stop testing, he believed that they would keep it. Like the British, the Soviets had decided that a halt to testing was in their interest. Even if there was only a small risk of being caught cheating on an agreement, he argued, the Soviets would not take that risk because of its "politically disastrous consequences." On the other hand, if the British government decided to turn down an agreement with the Russians under pressure from the Americans, Ormsby-Gore felt that "accusations of bad faith in the negotiations will be very difficult to answer." Indeed, his own judgement was that "such accusations would be justified."

In late February, the American delegation in Geneva had the breaking-off statement, prepared by the State Department, in its

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[39] Ibid.
hands. The delegates were instructed to use it as soon as the Russians presented them with a good opportunity. The Soviet Union disappointed the administration by remaining flexible in the talks, especially regarding the issue of control. The British also made it difficult to break off the negotiations. Because of the public support for the talks in his country, the prime minister sent several messages to the president, emphasizing his belief in the importance of the conference, and indicating his willingness to accept something less than perfect control in order to reach a comprehensive accord with the Soviet Union. It was Macmillan’s view that "the Russians still wanted an agreement because they were concerned about the spread of nuclear weapons to other countries as well as worried about the mounting cost of the nuclear program." Amidst a great deal of antinuclear protest in the U.K. and in an effort to improve relations with the Soviet Union, the prime minister decided to visit Moscow during the last week of February. This decision was significant since, as Macmillan himself emphasized, "No Prime Minister in office or Head of Government of any of the Western countries had visited Russia since the end of the war." When he arrived, the British leader

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40 Memo from Secretary Dulles to the President, February 21, 1959, Dulles-Herter Series, DDEL, Abilene; Top Secret Telegram from Michael Wright to H.C. Hainworth, Foreign Office, October 7, 1960, FO371/149304, PRO; Secret Memo from Ormsby-Gore to the Head of the Atomic Energy and Disarmament Department, July 4, 1960, FO371/14923, PRO, Kew.

41 Macmillan, Riding the Storm, 592.

42 Appleby, "Eisenhower and Arms Control," 305.
attended a dinner with Khrushchev, who began by suggesting that it was best for the U.S.S.R. and the U.K. to put the past behind them and "decide what should be done to melt the ... 'cold war' ice."  During this trip, the British and Soviet leaders reached some agreement on several important topics, including Berlin, nuclear tests and a summit. By the end of the visit, Khrushchev had agreed both to withdraw his ultimatum regarding Berlin and to attend a summit meeting with the Western powers. He also liked an idea put forward by Macmillan regarding the control system that would form the basis of an agreement to end testing. According to this proposal, the nuclear powers would agree to a fixed number, or quota, of inspections that could be carried out each year in response to any suspicious seismic events.

Back in Geneva, both the U.K. and the Soviet Union manifested their desire to keep the talks going by putting forth compromises regarding the number of inspections and the staffing of the control stations. The American administration was uninterested in making any concessions on these issues, however.


44 During a conversation with the president, the secretary of state remarked that "It struck him that Macmillan had given in on the issue of a conference with the Soviets to the extent that he, Macmillan, is now associated with the Soviet position on the agenda." See Summary of Telephone conversation with the secretary, March 4, 1959, Special Assistants Chronological Series, John Foster Dulles Papers, DDEL, Abilene.


46 Memo from John Eisenhower to the President, January 30, 1959, Diary Series, AWF, DDEL; Telegram from U.S. Delegation in Geneva to the State Department, March 8, 1959, Dulles-Herter Series, AWF, DDEL, Abilene.
Ambassador Caccia reported from Washington that the "drift in American thinking seemed to be towards tougher attitudes." During a meeting with Acting Secretary Herter, Eisenhower suggested that although "we do not have to have a [control] system better than that agreed upon a year ago, we do ... have the right to go in and inspect any questionable occurrence." In messages to the prime minister, the president firmly rejected any compromise on the control issue, concluding that "I believe we should contemplate no proposals of this type."

As a result of the administration's intransigence, the American delegates in Geneva had virtually nothing to talk about in their meetings with the Soviets and the British. On March 8, the head of the delegation reported to the State Department that "essentially it is a problem of how to mark time until the basic decisions are made in Washington." He made two suggestions: the U.S. should either relax its position on the control issues or ask for a recess. The latter was probably the best course of action since the former "could create a misleading impression of progress in the negotiations, and also create some awkwardness if our decision is to end up [the conference] soon."

The next day, Eisenhower sent a message to Macmillan

"Macmillan, *Riding the Storm*, 635.

"Memo of Conversation with the President, February 23, 1959, Diary Series, AWF, DDEL, Abilene.

"Message from "Ike" to Prime Minister Macmillan, February 23, 1959, International Series, AWF, DDEL, Abilene.

"Telegram from the U.S. Delegation in Geneva to the State Department, March 8, 1959, Dulles-Herter Series, AWF, DDEL, Abilene."
recommending a recess of the negotiations at an early date. If the talks continued, without a pause, the president feared that "we will be faced with widespread expectations that there will be compromises on these principles of international control for the sake of stopping tests..." In Eisenhower's view, a recess would give the West a chance to make the rest of the world understand its position on the control system.  

The Nuclear Test Ban Conference recessed on March 19 for the Easter holidays. By this time, John Foster Dulles was at Walter Reed Hospital, terminally ill with abdominal cancer. As noted by the British, his absence from the State Department had an important impact on the American testing policies. Unlike Dulles, the new Secretary of State, Christian Herter, was not a strong advocate of a test ban agreement at Geneva. As a result of Dulles' illness, prime responsibility for decision-making regarding testing and for drawing up instructions for the U.S. Delegation in Geneva was given to the Committee of Principals. 

The domination of this body by the Atomic Energy Commission and the Department of Defense further weakened the hand of the State

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52 Dulles resigned as Secretary of State in mid-April and died shortly after, on May 27.

53 Report on the Nuclear Tests Conference, Prepared by H.C. Hainworth, Foreign Office, October 13, 1960, FO371/149306, PRO, Kew. The president had established the Committee of Principals, a working group on disarmament policy, in April 1958. It was comprised of the Secretary of Defense, the head of the Atomic Energy Commission, the Secretary of State, the Director of the CIA and representatives from the President's Science Advisory Committee.
Department on the testing issue and made an agreement at Geneva even more unlikely.

As support for a test ban weakened within the administration, the British and Soviets pressured the United States to become more flexible at Geneva and to reconsider the possibility of a summit meeting. After a trip to the Soviet Union, the British prime minister consulted with Eisenhower at Camp David about various issues, including the impasse at Geneva. Although Macmillan favoured a comprehensive ban, Eisenhower preferred a proposal which would ban atmospheric tests only. The two leaders also differed on the question of a summit. The prime minister believed that Khrushchev was acting in a conciliatory fashion. During Macmillan's visit to Moscow in February, the Soviet leader had demonstrated a renewed interest in the test ban issue. He had also withdrawn his ultimatum regarding Berlin and indicated his desire to attend a Big Four summit. Therefore, the prime minister hoped that the U.S. would consent to such a meeting. Despite Macmillan's urging, Eisenhower demurred, arguing that he personally could not attend unless there was evidence of Soviet "good faith and some progress that promised results from a summit." When the British leader pleaded with him to reconsider, the president still resisted, suggesting that although he would approve a Foreign Ministers'
conference he would only agree to a summit "as developments justify." Not satisfied with this "ambivalent formula," the prime minister concluded that "we must agree to differ" on this issue.

In the U.S. a new scientific theory emerged which presented a further obstacle in the negotiations at Geneva. At the request of Edward Teller, a well-known opponent of any agreement on testing, a scientist named Albert Latter did a series of theoretical computations to estimate what would happen if an underground explosion was detonated in a large cavern. At the time, Latter was working for the Rand Corporation, a California research centre funded by the Air Force. As a result of his calculations, Latter came up with some "tentative findings" which came to be known as the "decoupling" theory. According to this theory, it would be difficult to detect a test if the explosion occurred in a an extremely large underground cavity. Although the administration quickly became very interested in "decoupling," James Killian urged caution, explaining that this was not a proven theory; there was no experimental evidence to

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59 One of Teller’s scientific colleagues, Isidore Rabi once described him as "brilliant in inventing excuses and ways" that a test ban "could be circumvented." See Divine, *Blowing on the Wind*, 254, 304.
support it. Scientists did not know if it was even possible to excavate the necessary large holes. In Killian's view, which was shared by two other respected scientists, Robert Bacher and George Kistiakowsky, it was highly unlikely that the Soviet Union would attempt to conceal a nuclear test by this "large-hole method" since it would be extremely costly and expensive. A ten kiloton explosion, for example, would probably require a one million cubic-metre hole, and might cost up to twenty million dollars.

Despite the caution of scientists like Bacher and Killian, this theory was very appealing to the American administration because it provided a convenient justification for the decision not to pursue a comprehensive test ban at the negotiations in Geneva. Shortly after he was informed about the new theory, Eisenhower initiated a reconsideration within the administration of the proposal put forward earlier by the AEC (and Albert Gore) banning tests in the atmosphere but not in outerspace or underground. In his view, such a proposal would be attractive to

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60 Report of the Panel on Seismic Improvement, March 16, 1959, Subject Series, Alphabetical Subseries, WHOSS, DDEL; Memo of Conversation with the President, March 13, 1959, Diary Series, AWF, DDEL, Abilene.

61 Meeting of the Principals, July 9, 1959 and August 26, 1959, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL. See also Memo of Meeting with Vice President Nixon, December 16, 1959, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene. Robert Bacher, a former AEC Commissioner, was a Deputy Representative for the U.S. at the negotiations in Geneva. In 1958, he had served as one of the technical experts at the conference there. George Kistiakowsky had served on the PSAC since its founding and would replace Killian as the president's science advisor in late July, 1959.
the American public since there was growing evidence that nuclear tests (particularly Strontium-90) caused "bad physical effects." 62

The British disagreed with the American approach. From Geneva, David Ormsby-Gore conveyed his opinion that the American proposal for an atmospheric ban would "perhaps make the best of a bad job, but that is not saying much." Even if the Soviet Union accepted the idea, which in his view was highly unlikely, such an agreement would not prevent proliferation or the continuation of the arms race. Indeed, it might even lead to "competitive underground testing." From his perspective, the whole situation was "taking on the character of a nightmare" considering that "the Russians probably want to stop testing and are not interested in underground tests in any case." 63

The prime minister shared Ormsby-Gore's concerns about the new American position. Despite resistance from his own Ministry of Defence, 64 Macmillan still believed that the West should

62 Memo of Conversation with the President, March 17, 1959, Subject Series, State Department Subseries, WHOSS, DDEL. On March 6, scientists had told Eisenhower that high levels of Strontium-90 had been discovered in Minnesota wheat. See Minutes of Meeting, March 6, 1959, Cabinet Series, AWF, DDEL, Abilene.


64 Like the American defence bureaucracies, the British Ministry of Defence preferred an atmospheric ban, based on the argument that the Soviet Union "would be inclined to cheat" under an imperfect control system. Although the Ministry realized that "great political advantages" would be gained from an agreement with the Russians to ban all tests, they worried that a complete ban might be risky since it would likely be "regarded by the rest of the world as an admission that nuclear tests of any kind were morally reprehensible." This was dangerous since it was "not much
strive to reach an accord banning all tests.  He emphasized the importance of continuing the conference, "at all events," at least for the time being.

During the last week of March, the differences between the positions of the U.K. and the U.S. became more obvious when representatives from the Foreign Office went to Washington to discuss the American proposal. The British conveyed their concern that an atmospheric ban would not find support in either the U.K. or the U.N. When he met with John McCone, Foreign Secretary Lloyd indicated that his government still hoped to negotiate a treaty for the complete suspension of all tests (including underground explosions) when the talks resumed. In his opinion, political ingenuity could produce a satisfactory agreement with the Soviet Union. He suggested that the best way of a step from there to the argument that nuclear weapons were bad things and that even to contemplate using them was morally wrong." In its response to the Ministry, the Foreign Office pointed out that "If we were faced now with an actual decision whether or not to use the deterrent, I think we should find that the public objection to its use was already about as strong as it could possibly be, and by no means exclusively on moral grounds." The Foreign Office emphasized the advantages to be gained by a comprehensive ban, including the reduction of tension between East and West, the prevention of further proliferation, and the support in the U.K. for such an agreement. See Letter from Richard Powell, Ministry of Defence, to C. O'Neill, Foreign Office, March 31, 1959, F0371/140437; and Telegram from the Foreign Office to the Ministry of Defence, April 3, 1959, F0371/140437, PRO, Kew.


to break the impasse in the negotiations was by offering the Russians some concession on the control system (such as a lower number of on-site inspections). In response, the AEC Chairman explained that a compromise like this was impossible due to American public opinion and the new "decoupling" theory.68

Philip Farley, of the State Department, warned the British that it would be "embarrassing" for the U.S. if the U.K. delegates continued to make further concessions in the negotiations. The administration's plan was to proceed in the conference in such a way as to lead to an early breakdown on the issue of control, and then offer either an agreement on, or a unilateral declaration announcing, a permanent cessation of tests in the atmosphere only.69

In the two weeks prior to the resumption of the talks, the British Prime Minister tried to change Eisenhower's mind about this course of action. In a letter on April 8 he asked him to consider a modified version of a comprehensive ban. Since he was certain that the Russians would not accept the American proposal, Macmillan suggested that the West be prepared to announce that it would combine a permanent atmospheric ban with a limited moratorium on underground and high altitude tests. Initially,

68 Memo of Meeting, March 23, 1959, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.

this moratorium would be a voluntary, rather than a formal, arrangement, lasting approximately two years. During this period, the nuclear powers would work towards establishing a satisfactory control system that could be used as the basis for a more permanent ban on underground and high altitude tests. Although it was always possible that the Russians would carry out some undetected experiments, the prime minister believed that the benefits outweighed the risks. Not only would such an arrangement have a positive impact upon world public opinion, it was also "possible that the Russians would accept the offer."70

Predictably, this proposal met strong opposition within the American administration. As usual, most of the criticism came from the Joint Chiefs of Staff, the Defense Department and the Atomic Energy Commission. According to the JCS, there was great doubt that the U.S. could, without underground tests, "meet the threat posed by a Soviet attack capability." If the administration supported the British proposal, this would mean the "acceptance of a definite risk in meeting a positively existing threat."71 Expressing his "strong feeling" against the British offer, Secretary of Defense McElroy made a similar argument, contending that the U.S. "would really have been had by the Russians" if it agreed to extend the moratorium beyond the

70 Telegram from the British Prime Minister to the President, April 8, 1959, FO371/140437, PRO, Kew.

71 Letter from the JCS to the President, May 9, 1959, JCSRG 218, 4613, NA. See also Memo from the JCS to the Commander in Chief, Strategic Air Command, June 2, 1959, JCSRG 218, 4613, NA, Washington.
Donald Quarles, another Pentagon official, believed that the U.S. would risk damage to "its overall security position" if it accepted the British position. He suggested that the United States should resume underground testing as soon as possible after October 31. Such a move would be the best possible combination of "Cold War tactics and technical requisites."  

The Atomic Energy Commission was equally opposed. Chairman McCone explained that even a one year moratorium on underground and high altitude testing would have far-reaching, negative effects on the weapons laboratories. It would be almost impossible to retain the teams working in these labs in the absence of firm goals for their work. Furthermore, these tests were necessary for the development of new weapons systems, particularly the anti-missile defense. As he pointed out, the "public had been convinced of the need for protection against attacking aircraft and the anti-missile system was looked at in the same light." In general, the AEC had "considerable concern about any proposal which would stop our testing underground or in outer space."  

The President's Science Advisory Committee disagreed with the arguments made by the defense bureaucracies. The head of the PSAC, James Killian, disputed the view that more testing would

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72 Memo of Conversation, State Department, April 13, 1959, DSRG 59, 711.5611/4-1359, NA, Washington.

73 Memo of Conversation, State Department, April 15, 1959, Series I, Subseries B, WHOSAT, DDEL, Abilene.

74 Ibid.
lead to improvements in the anti-missile system. According to him, the primary technical problems standing in the way of such a system were "engineering rather than nuclear." Further testing was not necessary since the United States already had a warhead which could be used in a defense system.  

The State Department analysed the political pros and cons of the British offer. On the one hand, acceptance of the proposal might weaken the public support in the U.S. for an airtight control system. On the other hand, the large segment of world opinion which desired an end to testing would welcome such a move. It would also provide an effective rebuttal to Soviet charges that the U.S. was not really interested in stopping all nuclear tests.  

In the end, Eisenhower sided with those who opposed the British offer. Acknowledging that the "world would probably not stand for it," he told his advisors that that he preferred a ban on atmospheric tests only. In part, this decision was based on his view that the AEC and the DOD had the most compelling arguments. It was probably also affected by domestic political considerations. On April 10, the House of Representatives had passed a resolution "emphatically endorsing the principle that an adequate inspection system must be part of any international

75 Ibid.
76 State Department Memo, April 14, 1959, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.
77 Memo of Conversation with the President, May 5, 1959, Diary Series, AWF, DDEL, Abilene.
agreement involving the suspension of nuclear weapons tests."\(^7^8\) Recognizing the pressures affecting the president's decision, Macmillan agreed to "go along" with the American proposal in Geneva, at least for the time being.\(^7^9\)

On the day the talks resumed, April 13, Eisenhower sent a message to Khrushchev outlining the new American position. If the Soviet Union refused to accept an effective control system, would it not be better, he asked, to negotiate an agreement banning the testing of nuclear weapons in the atmosphere only?\(^8^0\) Disagreeing with this proposal, Khrushchev retorted that it did "not solve the problem." Such a ban would not prevent the production of new and ever more deadly nuclear weapons. It would not satisfy the peoples of the world who longed for a complete prohibition of all testing. And it would be misleading to the public since tests would continue underground and at higher altitudes.\(^8^1\)

On his recent trip to Moscow, the British prime minister had suggested a proposal regarding the control system which was attractive to Khrushchev. Under this proposal, the parties to an agreement would be allowed to carry out each year a certain

\(^7^8\) House Resolution 234, 86th Congress, 1st session, April 10, 1959, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.

\(^7^9\) Telegram from Harold Macmillan to President Eisenhower, April 11, 1959, FO371/140437, PRO, Kew.

\(^8^0\) Letter from Eisenhower to Khrushchev, April 13, 1959, International Series, WHOSS, DDEL, Abilene. Wadsworth presented the details of the proposal the same day in Geneva.

\(^8^1\) Letter from Khrushchev to Eisenhower, April 23, 1959, International Series, AWF, DDEL, Abilene.
previously determined number of inspections on the territory of the Soviet Union as well as of the United States and Great Britain if the reports of the control posts raised suspicions that a nuclear explosion had taken place. Based on a "quota" system such as this, Khrushchev believed that it would be possible, if the political will was present, to conclude a treaty providing for the cessation of all types of nuclear weapons tests -- in the air, underground, underwater and at high altitudes.\textsuperscript{82}

Khrushchev's letter put the administration in a difficult position. Rather than responding to the specific points raised in the message, Eisenhower approved a public reply which gave a rather misleading impression since it suggested that the administration had been pursuing a comprehensive treaty. According to the press statement released by James Hagerty on April 27, the "U.S. does want a complete test ban. That is what Eisenhower proposed in August 1958, and [that is] what we have been trying to get agreement on for five months in Geneva."\textsuperscript{83}

During a meeting with his advisors a week later, it was obvious that there was still a lot of resistance in the administration to any agreement with the Russians. In fact, Chairman McCone informed the State Department that the Atomic Energy Commission now had cold feet about the U.S. offer to suspend testing in the atmosphere, even if the Soviets made further concessions on the control system. The AEC feared that

\textsuperscript{82} Letter from Khrushchev to Eisenhower, April 23, 1959, International Series, AWF, DDEL, Abilene.

\textsuperscript{83} Press Release from James Hagerty, April 27, 1959, International Series, WHOSS, DDEL, Abilene.
the system for inspection proposed by the British would not be sufficient to "insure compliance" on the part of the U.S.S.R. Impatient with the continuing reservations of the AEC, the president indicated that it was "essential to make a dent in our current impasse." Secretary Herter agreed, especially since the Russians appeared "ready to give in on all points of contention in the current negotiations." According to him, the State Department was beginning to suspect that the AEC would not support any agreement with the Soviet Union. Eisenhower reacted sharply to this observation. Pointing out that it was "not up to McConne to dictate to the president how the U.S. would be secure," he instructed Herter to "reprimand the AEC in his name." The secretary of state rejected this suggestion on the grounds that it was inappropriate. According to the policy established by John Foster Dulles, any discussion of interagency divergencies with Eisenhower was to be conducted during a meeting in which all the agencies concerned were represented. If Herter followed the president's instruction, he feared that it would "put him in a very bad light." Rather than admitting that Herter was right, Eisenhower responded vaguely that McConne "should be notified that the idea of ninety percent assurance" was the administration's position on the control system, "on which we will not run out."84

Eisenhower had the power to reprimand the AEC himself and, indeed, to shift the administration in favour of the British

84 Memo of Conversation with the President, State Department, May 2, 1959, Subject Series, State Department Subseries, WHOSS, DDEL, Abilene.
proposal, but he chose not to, nor did he consider exerting his leadership to mobilize congressional and public support for the proposal. Although the president was sympathetic to the State Department's concerns about world opinion, he shared the defense bureaucracies' views regarding the Soviet Union and the control system. Because he did not trust the Russians, he believed that a large number of on-site inspections was a necessary part of any control system. He was "frightened of the British proposal" because it placed restrictions on the number of inspections allowed in any given period of time.85

At Geneva, the control and inspection issue became one of the major stumbling blocks in the negotiations. On April 28, the Soviet delegates suggested that if the number of on-site inspections was agreed upon in advance, as proposed by the British, the U.S.S.R. would agree to permanent inspection groups on its territory, permit automatic inspection if the control instruments indicated a suspicious seismic event, and drop its earlier demand for a veto on the dispatch of inspection teams.86 These concessions left the American delegates in an awkward situation because they did not have any instructions which would allow them to respond in a positive manner. The head of the U.S. delegation, James Wadsworth, became increasingly frustrated by the "lack of policy decisions" coming from Washington on these

85 Ibid. See also Memo from the British Embassy in Washington to the Foreign Office, May 28, 1959, F0371/140516, PRO, Kew.

86 Synopsis of State and Intelligence Material Reported to the President, April 29, 1959, Diary Series, AWF, DDEL, Abilene.
issues. In his view, the AEC was winning the battle against any form of agreement with the Russians.\(^7\)

Although the American administration was not interested in making any concessions on the inspection issue, it was considering a new proposal regarding the control system. In order to improve detection capabilities, the U.S. might suggest that the U.K. and Soviet Union join it in an experimental program involving a series of underground nuclear detonations, the purpose of which would be to gain "additional seismic data." Apparently, Eisenhower liked this idea much better than the British proposal regarding a quota on on-site inspections.\(^8\)

Accordingly, on May 5, a press release announced the president's approval of a ten million dollar research and development program for Fiscal Year 1960. Dubbed "Vela," this was described as an "experimental program of underground detonations encompassing both high explosives and where necessary nuclear explosions."\(^9\)

In early May, the test ban negotiations adjourned again while the Foreign Ministers met in Geneva to deal with other issues, such as Berlin. At these meetings, Khrushchev continued to back down on his ultimatum to sign a separate peace treaty with East Germany, but this did not seem to have much impact on

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\(^8\) Draft Statement by Wadsworth on Resumption of Geneva Test Talks, April 13, 1959, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL; Memo of Conversation with the President, May 4, 1959, Diary Series, AWF, DDEL, Abilene.

the American administration. When the negotiations in Geneva resumed in June, the outlook remained bleak. Historians such as Divine and Appleby contend that the talks made no headway because of Soviet uncooperativeness. However, of the three powers participating in the negotiations, the United States appeared to be the most intransigent. After the talks resumed, the U.S. continued to stonewall the negotiating process. Indeed, Macmillan confided in his diary that he felt "almost in despair" about the increasingly strong resistance in the U.S. to an agreement with the Russians. "Even if nothing could be achieved in the broader sphere," the prime minister wrote, "the end of these tests would at least be a dramatic step forward, and give comfort to millions of people all over the world." In Geneva, the American delegates did not receive any new instructions or advice about tactics from Washington, and the talks soon stalled again. In order to improve relations between East and West, Prime Minister Macmillan brought up the idea of a Four Power summit conference again. As in March, Khrushchev approved of this idea but Eisenhower had serious reservations. Even though CIA Director Allen Dulles reported that the Soviet leader wanted a summit "very badly," Eisenhower distrusted Khrushchev's motivations, believing he was only interested in

90 Divine, Blowing on the Wind, 258.

91 Appleby, "Eisenhower and Arms Control," 418, 439-40; Divine, Blowing on the Wind, 251, 282, 287; Divine, Eisenhower and the Cold War, 136, 140, 143.

92 Divine, Blowing on the Wind, 258.
gaining propaganda advantages. When the British leader pressed him further, the president became very impatient. During a meeting with Harold Caccia, Eisenhower informed the British Ambassador that "we will not be bludgeoned into going to a summit meeting." When the discussion turned to issues which might be discussed during a summit, like Berlin, the president made an even more revealing comment when he stated that "speaking for himself he would rather be atomized than communized."

Throughout the summer of 1959, the defence bureaucracies encouraged the American leader to resume nuclear testing. In response to a request made by Eisenhower, the PSAC explained that two new series of nuclear tests were currently under consideration: the first, sponsored by the AEC, would be a series of underground "diagnostic" explosions in Nevada to test the design of "new [nuclear] devices"; the second set, sponsored by the Department of Defense, would be carried out in the Pacific, and focus on the development of new types of nuclear weapons. In total, the funds required for these series amounted to more than two hundred million dollars. According to the Joint Chiefs of Staff, it was "imperative" that the U.S. complete its preparations for these tests in the event that the negotiations

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93 Memo of Conversation with the President, June 8, 1959, Subject Series, State Department Subseries, WHOSS, DDEL, Abilene.

94 Memo of Conversation, June 16, 1959, Diary Series, AWF, DDEL, Abilene.

95 Memo of Conversation with the President, July 23, 1959, Diary Series, AWF, DDEL. See also Report to James Killian, "AEC and DOD Plans for Nuclear Tests," April 7, 1959, PSAC Series, DDEL, Abilene.
in Geneva broke down. Because the JSC considered the resumption of testing "vital" to the security of the U.S., they felt it necessary to repeat their argument that an adequate military posture for the United States would not be attained until it possessed a "complete spectrum of weapons compatible with modern delivery systems, which would make it possible to apply selectively adequate force against any threat." In other words, they believed that testing should be resumed on an unlimited basis so that a wide variety of nuclear weapons could be developed, including tactical weapons, "clean" bombs, an anti-missile system, and warheads for IRBMs and ICBMs.

The AEC and the DOD concurred with the JCS. Chairman McCone contended that further testing was "extremely important" to the defense position of the U.S. Secretary of Defense McElroy told the Washington Post that the U.S. was "paying the price" for the moratorium by allowing its nuclear weapons program to stagnate. Because he believed that the continued development of nuclear weapons was of "far-reaching importance," he recommended to the president that the U.S. should resume testing if the talks in

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96 Draft Memo from the JCS to the Secretary of Defense, May 1959, JCSRG 218, 4613, NA, Washington.

97 Memo from N. Twining, Chairman of the JCS, to the Secretary of Defense, August 18, 1959, JCSRG 218, 4613, NA. See also Memo from the Director, JCS, to the JCS, November 1959, JCSRG 218, 4613, NA, Washington.

98 Meeting of the Principals, August 26, 1959, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.
Geneva did not produce an agreement by October 31.99

During a meeting of the Committee of the Principals, the President's Science Advisory Committee disagreed with the arguments made by the defence bureaucracies. After careful study, a panel of scientists from the PSAC, approved by Eisenhower, had concluded that the additional military knowledge to be gained from further tests was very limited. According to the scientists, some of the proposed nuclear tests might protect against the possibility of "gross error in design." Beyond that, however, the development of none of the planned weapons systems was "clearly contingent on the outcome of the proposed nuclear tests."100

Chairman McCone disliked the "moderate tone in which the general conclusions of the Ad Hoc Panel were expressed." He and Secretary McElroy believed that a resumption of testing was imperative since the American nuclear arsenal was what "permits us to be a military power." The United States based its defence policy on nuclear weapons to offset the manpower advantage of the Soviet bloc. George Kistiakowsky, who had recently replaced Killian as the president's science advisor, was unswayed by the


100 This panel was named the Ad Hoc Panel on Nuclear Test Requirements. Meeting of the Principals, August 26, 1959, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene. See also Background Note re: Nuclear Tests Conference, Foreign Office, December 1959, FO371/140442, PRO, Kew.
rationale presented by the DOD, in view of the fact that the combined manpower of the United States and the NATO countries was actually greater than that of the U.S.S.R. and its satellites.  

Kistiakowsky believed that the U.S. should pursue a comprehensive agreement in Geneva. A distinguished Harvard University chemistry professor who had served on the PSAC since its founding, Kistiakowsky was a 58-year-old Ukrainian who had fought the Bolsheviks during the Russian Civil war, came to the United States in the 1920s, and played a key role in the wartime Manhattan Project. Although he was fiercely anti-Soviet, the new science advisor was convinced that a comprehensive test ban offered the best chance to curb the arms race.

On August 12, Khrushchev publicly stated his government's willingness to reach a comprehensive agreement on the discontinuance of nuclear weapons tests, "an important step on the way to the implementation of further, more extensive measures on disarmament and the improvement of the international situation." According to the American ambassador in Moscow, Llewellyn Thompson, Khrushchev made this statement because of a genuine interest in the reduction of armaments and a comprehensive test ban. In the ambassador's view, the Soviet leader was motivated largely by his desire to prevent the spread

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101 Ibid.
102 Divine, Blowing on the Wind, 284–5.
of nuclear weapons to China and Germany.\textsuperscript{104}

Within the U.S. defense bureaucracies, however, suspicion greeted Khrushchev's announcement. In the opinion of the AEC and DOD, the Russian support for a comprehensive ban was a propaganda ploy designed to leave the United States in an inferior military position. The Soviet leaders were trying to trick the Western powers into signing an agreement to stop testing so that they could "get a lead on all nuclear weapons, thus leaving the free world to the mercy of their defence superiority."\textsuperscript{105}

Although Eisenhower tended to sympathize with this perspective, decision-makers in other countries, such as Britain, Germany and France, held to the belief that the Soviet Union genuinely wanted an agreement to cease testing. From Geneva, British negotiator Michael Wright reported to the Foreign Office that, despite the differences with the Americans, the best strategy was to pursue the kind of treaty advocated by the Russians -- a comprehensive ban on testing (including an agreement, or at least a moratorium, on underground explosions). Wright did not think that the British government should support the more limited treaty proposed by the Americans (applying to the atmosphere only) since it was "a fraud on the public" certain to receive heavy criticism from the UN General Assembly.\textsuperscript{106}

\textsuperscript{104} Memo of Conversation with Ambassador Thompson, October 16, 1959, Diary Series, AWF, DDEL, Abilene.

\textsuperscript{105} Meeting of the Principals, August 13, 1959, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.

\textsuperscript{106} Memo from Michael Wright to the Foreign Secretary, August 4, 1959, FO371/140439, PRO, Kew. See also Letter from John McCone to Christian Herter, July 7, 1959, Series 6, Testing File,
In late August, Eisenhower met with Macmillan during a visit to Europe. Among other topics, the British leader was very keen to discuss the political implications of the negotiations in Geneva. In spite of all of the technical difficulties introduced by the U.S. (i.e., the new seismic data and the "decoupling" theory), the prime minister remained convinced that there were real political advantages to be gained from an agreement banning all tests. In his view, public opinion in the U.K. and the international community would welcome such a ban. The president, however, expressed doubts as to whether the U.S. could support such an accord. Emphasizing his support of the more limited atmospheric ban, Eisenhower explained that a comprehensive treaty would be very difficult to ratify in the Senate, "unless the balance of testimony indicated that the agreement could prove an adequate deterrent against Russian cheating." From his own perspective, the president believed that the "real danger" behind the British proposal was that it would give the Soviets what they wanted "without any controls whatever and that there was grounds for real suspicion that this might well be used by the Russians in performing a number of undetectable underground shots."

Obviously frustrated with the American approach, Macmillan concluded the meeting by informing Eisenhower that the British might have to make their own public statement, indicating that no

John McCone Papers, DDEL, Abilene.
further British tests would take place.107

The French president, Charles de Gaulle, also believed that the Soviets were serious about an accord. Because the French were then preparing for their first series of nuclear tests, to be carried out in the Sahara in early 1960, de Gaulle worried that the negotiations at Geneva might result in a treaty. He felt that the Russians were determined to reach a comprehensive accord on testing because of their fear that nuclear weapons would proliferate to countries like China. Indicating that an agreement in Geneva would not lead him to suspend the French nuclear weapons program, the president nevertheless feared that enormous indirect and direct pressure would be exercised on France to forego her own tests if the other nuclear powers reached an accord.108

During a meeting in Bonn, Eisenhower told West German Chancellor Konrad Adenauer that he was skeptical about the

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107 Memo of Conversation between Eisenhower and Macmillan at Chequers, August 30, 1959, International Series, AWF, DDEL, Abilene.

108 Letter from the British Embassy in Paris to the Foreign Office, June 10, 1959, FO371/140616, PRO; Memo of Conversation between Eisenhower and de Gaulle, September 4, 1959, International Meetings Series, AWF, DDEL, Abilene. The French Government’s decision to begin atomic tests in the Sahara was badly received by the people of Nigeria. Despite assurances by the French that the health and livestock of the people near the test site would be "fully guaranteed," there was widespread protest from politicians, organizations and the press. One headline from the Daily Service asked "Why pick on Africans as ideal guinea pigs for France’s show of strength?" See Telegram from the Governor-General, Lagos, Nigeria, to the Foreign Office, July 25, 1959, FO371/140619; "France Angers Nigerians: Africans the H-Test Guinea Pigs," Manchester Guardian, July 15, 1959, FO371/140616, PRO, Kew.
apparent Soviet willingness to reach an agreement at Geneva. He saw no chance to reach a satisfactory accord with the Russians on the control issue. Although the German leader agreed that a "certain skepticism was not out of place," he thought it feasible that the Russians were ready for a relaxation of tension. This optimism was based on certain trends which he had detected in the Soviet Union, the most important being the emphasis Khrushchev was placing on the Seven Year Economic Plan. In a conversation with senior Russian official Anastas Mikoyan, Adenauer had learned that Khrushchev was serious about overhauling the Soviet economy. While Stalin had refused to consider diverting investments from armaments to other fields, Khrushchev was willing now to do so. Because of the serious economic difficulties faced by the Soviet Union, Khrushchev had decided that less money must be spent on armaments. The Soviet leader's desire to improve the living standard in the U.S.S.R., combined with other factors, such as the possibility of creating a satisfactory control system, led Adenauer to conclude that an agreement with the Russians was possible.¹⁰⁹

In an effort to improve relations with the West, promote "peaceful coexistence," and resolve the Berlin question, Khrushchev met with Eisenhower in September at the presidential retreat at Camp David. During this visit, the Soviet leader and his advisors touched on some of the same themes discussed by

Adenauer. Early in his conversation with the president, Khrushchev attempted to underline the differences between the Stalin regime and the current Soviet leadership, citing as examples the reductions in the Soviet police force and the abolition of concentration camps. Khrushchev also commented on the extravagant cost of the arms race and the dangers inherent in its continuation. Regarding the negotiations in Geneva, the Soviet leader indicated his hope that some agreement would soon be reached on the central issues of inspections and the staffing of the control posts.\textsuperscript{110} He repeated his desire for a summit conference. He also removed any hint of a deadline or ultimatum regarding Berlin. Although the President remained non-committal regarding the negotiations in Geneva, he did finally agree to attend a summit the following spring.\textsuperscript{111}

Perhaps because the administration had nothing new to discuss in Geneva, Eisenhower decided to request another recess. Although the Soviets were asked to agree to this recess while Khrushchev was still in the U.S., the president had made the decision earlier, in August. At that time, he believed that this was the best strategy for the United States, even though the State Department warned him that it might raise the "suspicion that we are stalling to keep the talks at a minimum pending the

\textsuperscript{110} Memo of Eisenhower’s Meeting with Khrushchev at Camp David, September 1959, International Series, AWF, DDEL; Memo of Conversation with Khrushchev, September 23, 1959, International Series, AWF, DDEL, Abilene.

end of the moratorium on October 31st."112

As a result of the Soviet attitude, and the views expressed by other countries in favour of a comprehensive agreement, some members of the State Department, as well as many in the American Delegation in Geneva, believed that a shift in American policy was necessary. Prior to the recess, Michael Wright reported "very confidentially" James Wadsworth's view that the State Department, at least at the "desk level," were seriously thinking of supporting the British proposal for a comprehensive test ban because they realized that the position of their own administration was becoming "politically impossible." Wadsworth had indicated that he and some other delegates shared this view, albeit privately.113

During the recess in the talks, it became obvious back in Washington that Wadsworth was correct. On October 6, the Committee of Principals met to discuss tactics when the negotiations resumed at the end of the month. The State Department representative, Philip Farley, spoke out against the administration's earlier decision to table a treaty on atmospheric tests only. State did not consider this tactic to be politically acceptable, since it would allow the U.S. to be blamed for "causing the failure of the negotiations at a critical time in international relations." Instead, the department recommended that when the talks resumed, the American delegates

112 Memo of Conversation with the President, August 10, 1959, Diary Series, AWF, DDEL, Abilene.

113 Memo from Michael Wright to the Foreign Secretary, August 4, 1959, FO371/140439, PRO, Kew.
should begin to negotiate with the objective of achieving a complete ban on testing.\textsuperscript{114}

The AEC and the DOD clearly disapproved of this proposal based on their traditional arguments about the need for more testing and their distrust of the Soviet Union. The CIA, however, was more supportive, since a recent national intelligence estimate on Soviet motivations in the negotiations had concluded that the Russians would not cheat on a comprehensive agreement if there was even a chance that they would be caught. When the defense bureaucracies tried to rebut this argument by raising the possibility of the Soviets using the "decoupling" method to conduct clandestine tests, Kistiakowsky reiterated the PSAC's position that the U.S. should be very careful about this theory, since there were no "good and hard facts" to support it.\textsuperscript{115} The scientist felt so strongly about this matter that he indicated that he was willing to go before the Senate and testify that it would take a potential violator at least ten years to develop an underground system with any military value using the Latter ("decoupling") method. In his view, the "prospect of any country doing this was unrealistic, to say the least."\textsuperscript{116} Indeed, the "Large Hole" theory was "a little like seriously proposing nuclear tests on the other side of the

\textsuperscript{114} Memo re: Meeting of the Principals from Keeny to Kistiakowsky, October 6, 1959, WHOSAT, DDEL, Abilene.

\textsuperscript{115} Minutes from Meeting of the Principals, October 6, 1959, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.

\textsuperscript{116} Top Secret Telegram from the U.K. Delegation in Geneva to the Foreign Office, January 10, 1960, FO371/149272, PRO, Kew.
Despite the opposition of State, the CIA and the PSAC, Eisenhower decided to proceed with the proposal for an atmospheric ban when the talks resumed in Geneva. The president claimed that he "very much wanted to stop testing," but he just did not see how he could gain the "assurance" that he needed to support a comprehensive ban. Based on the contention that the Soviets might conduct clandestine tests, the U.S. informed the British that it was not prepared to negotiate a treaty banning all nuclear tests. Instead, the American delegates would introduce the "Large Hole" theory and table an alternative form of treaty, banning tests in the atmosphere, underwater, and in outer space, accompanied by an invitation to participate in a program of joint seismic research.

Perhaps in an effort to preserve their "special relationship" with the United States, the British decided that they would support the Americans in their decision, but they did so only reluctantly. "Because of the number and importance of the concessions" already made by the Russians, the Foreign Office believed that the U.S.S.R. "genuinely wanted a comprehensive treaty." It also believed that the Soviet Union "would probably

117 Minutes from the Meeting of the Principals, October 6, 1959, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.

118 Memo of Conversation with the President, October 27, 1959, Diary Series, AWF, DDEL, Abilene.

119 Brief from P. Wilkinson, Foreign Office, to Patrick Dean, Head of the Atomic Energy and Disarmament Department, October 21, 1959, FO371/140441, PRO, Kew.
not in practice evade a treaty." Consequently, the U.K. continued to hope that the United States would consider a moratorium on underground tests and perhaps even a comprehensive test ban. If Washington refused to become more flexible at Geneva, the British feared that the American position on testing would lead to "extreme Western embarrassment, first at the Conference, then at the United Nations, and finally in the world at large."\(^{120}\)

Because of these fears, Macmillan asked the Chairman of the U.K. Atomic Energy Authority, Sir Edwin Plowden, to reiterate the British position when he visited Washington in early November. During his visit with the president, Plowden explained that the prime minister still hoped that it might be possible to combine a permanent agreement to end tests in the atmosphere (and the sea) with a more informal suspension of tests underground for a period of two years, while the scientists continued to work on developing a more effective control system. Although Eisenhower could see the force of this proposal, he explained that it would be "extremely difficult" for the U.S. to agree to any accord if a satisfactory control system was not in place first. In addition to the opposition from the Pentagon, it would be impossible to get any agreement through the Senate which did not provide for "really adequate control," even if the period of the treaty were limited.\(^{121}\)

\(^{120}\) Ibid.

\(^{121}\) Note for the Record by Plowden, Chairman of the U.K. Atomic Energy Authority, November 12, 1959, FO371/140441, PRO; Telegram from Harold Caccia, British Embassy in Washington, to
In his report to the prime minister, Plowden tried to maintain an optimistic outlook, refusing to believe that "all is finally lost." Although he realized that "it would be extremely hard sledding," Plowden believed that the president had the authority to change the American position on testing, if he desired to do so. Indeed, if there was any one individual who might have some prospect of carrying Congress with him on this issue, it was Eisenhower, "with his exceptional power and prestige."122

Plowden was right about the president's power to change the American policy on testing. As Eisenhower himself put it, "the basic conception and direction of foreign policy is my responsibility and not one of any other Department or individual."123 At the time, a Gallup poll showed that public opinion was shifting in favour of an agreement to suspend testing, at least for another year.124 However, there was still no pressure from Congress to change the U.S. position on testing. Aware that the Senate would resist a treaty unless it was based on a foolproof control system, Eisenhower was unwilling to shift the American policy. Sharing many of the same views as the

the Foreign Office, November 16, 1959, FO371/140441, PRO, Kew.

122 Ibid.

123 Letter from Eisenhower to Emmet Hughes, October 31, 1959, Administration Series, AWF, DDEL, Abilene.

defence bureaucracies regarding the untrustworthy nature of the Soviet Union and the need for more nuclear weapons, he was unwilling to alter the U.S. position at the negotiations in Geneva. Although the president acknowledged that there had been a shift in Khrushchev's "practices, outward deportment [and] the tone of his letters," he remained convinced that there was "no change in the basic purpose of the Soviets." Since he distrusted the Russians, Eisenhower warned his advisors not to be too optimistic about reaching an agreement on testing or disarmament. In fact, shortly after the talks resumed, on October 27, he began to assert that perhaps "we have attached too much importance to nuclear disarmament." Sounding very much like the AEC and DOD, Eisenhower suggested that probably the best course was actually to "get better and better weapons of our own in the [nuclear] field." He even proposed that "for an indeterminate period, we must keep up our level of armaments, even though they are burdensome."\(^{125}\)

Eisenhower's pessimism about disarmament at this time was probably influenced by a study carried out by Charles Coolidge, an advisor for the Pentagon. Appointed the previous summer as the Director of the Study of Disarmament, Coolidge was expected

\(^{125}\) Memo of Conversation with the President, November 5, 1959, Diary Series, AWF, DDEL; Memo of Conversation with the President, November 12, 1959, Diary Series, AWF, DDEL, Abilene; Note for the Record by Plowden, Chairman of the U.K. Atomic Energy Authority, November 12, 1959, FO371/140441, PRO, Kew; Memo of Conversation with the President, December 6, 1959, International Meetings Series, AWF, DDEL. See also Memo of Conversation between the President and Secretary Herter, February 8, 1960, Diary Series, AWF, DDEL, Abilene.
to analyse the U.S. position on disarmament, to help the
departments of State and Defense prepare for the Ten Nation
Disarmament Conference in Geneva the following March. Coolidge
was rather an odd appointment, since he himself admitted that his
knowledge and ideas regarding disarmament were "pretty meager."
During a meeting with the president, he conveyed his thanks to
the various bureaucracies, such as State, Defense, and the AEC,
for providing him with a staff selected primarily for the purpose
of providing "imagination and ideas, rather than on the basis of
previous disarmament experience." As a result of the efforts of
these "admittedly inexperienced researchers," he had discovered
that the field of disarmament had already been so thoroughly
explored that "very little new material remained to be uncovered
by his study." Nevertheless, he concluded in his interim report
that "a balance of mutual deterrence" was preferable to an
attempt to limit nuclear weapons. This view was repeated, only
in stronger terms, in his final report, which recommended
rearmament rather than disarmament. That report advised the
administration to "strengthen its over-all defense posture before
significant arms control measures could be successfully
negotiated with the Soviets,... even if it will require a
substantial increase in defence expenditures." More
specifically, Coolidge recommended that the U.S. should
strengthen its strategic retaliatory force in order to maintain a
deterrent "against intercontinental nuclear war." Until this

126 Memo of Conversation with the President, July 29, 1959,
Diary Series, AWF, DDEL, Abilene.
state was achieved, the U.S. should not negotiate any measures, like a treaty including a ban on underground tests, which would limit its strategic capability. Although the State Department and other officials interested in disarmament were disappointed with this report, the president was more supportive. Accepting the assumption that nuclear disarmament could not be achieved, he agreed with Coolidge that the U.S. should strive to achieve a condition of mutual deterrence -- "a situation in which we could destroy the Soviet Union and the Soviet Union could destroy us."

Eisenhower liked the idea of an atmospheric ban on testing because it would improve the U.S. image in the world, "without ruling out the tests that were really essential" to maintaining the deterrent.\(^{127}\)

Given the president's pessimistic view about arms control, it is not surprising that his administration decided that it would be best to focus on technical, rather than political issues, when the negotiations resumed in Geneva. Based on recommendations from his advisors, Eisenhower proposed another technical conference in Geneva so that scientists could discuss the problems involved in establishing an effective inspection system, in light of the "new seismic data" and the "Large Hole" theory "discovered" by the U.S. since the original technical

\(^{127}\) Ibid; Minutes of Meeting with Charles A. Coolidge, December 1, 1959, NSC Series, AWF, DDEL; Disarmament Study, Headed by Charles A. Coolidge, December 29, 1959, Subject Series, Alphabetical Subseries, WHOSS, DDEL; Draft Statement by the State Department, January 8, 1960, Subject Series, Alphabetical Subseries, WHOSS, DDEL; Briefing paper for the President's Press Conference, February 17, Press Conference Series, AWF, DDEL, Abilene.
conference in 1958. Before the negotiations resumed, several top American scientists were asked whether they would participate in a technical conference focussing on the problems involved in detecting underground tests. Distrustful of the administration's motives, all of the American scientists who were initially approached refused to participate, suspecting that the U.S., as a matter of policy, intended to use the technical discussions as both a delaying action and a way to disengage itself from further negotiations regarding the suspension of underground tests.128

Nevertheless, by the time the Geneva Conference reconvened on October 27, George Kistiakowsky had managed to convince James Fisk, the scientist who had headed up the 1958 delegation of experts, and some other scientists, like Hans Bethe, to participate in the proposed technical meetings. A week later, the Soviet government agreed to send a team of Russian experts to meet with the Americans. As predicted by the American scientists who refused to participate, these technical talks soon resulted in another impasse in the negotiations. As in 1958, the American scientists were instructed to focus only on the technical problems associated with an underground detection system. However, the Russian scientists seemed to be operating under political instructions and refused to focus strictly on technical difficulties. In particular, they refused to discuss the "new data" discovered by the AEC and the "decoupling" theory. They

128 Memo of Discussion between the President and Secretary Herter, November 11, 1959, Subject Series, Alphabetical Subseries, WHOSS, DDEL, Abilene.
rejected the new seismic information, claiming that the original data (used in 1958) was sufficient and they dismissed the "big-hole" concept on the grounds that it was purely theoretical and unproven in practice.\footnote{129}

Because the Soviets refused to follow the American example and divorce the technical implications of a control system from its political implications, the technical meeting ended without any resolution in early December. The political conference recessed shortly after, with very little accomplished. This was rather unfortunate, since, according to James Fisk, "there was little doubt that the U.S.S.R. genuinely wanted a treaty."\footnote{130} The British representatives in Geneva felt the same way. After conversations with Federov and Tsarapkin in Geneva, William Penney, the head of the U.K. Atomic Energy Authority, reported that the Soviets were not showing even the "slightest inclination to withdraw from the control system." In his view, they were very keen to reach an accord on tests because of their worries about proliferation. Apparently, in the U.S.S.R. there was a "genuine domestic fear" that the balance of power would shift in favour of China if it achieved a nuclear weapons capability.\footnote{131}

Back in Washington, Philip Farley, the President's Special

\footnote{129} Divine, \textit{Blowing on the Wind}, 291-3.

\footnote{130} Memo of Conversation between James Fisk and Secretary Herter, December 28, 1959, NSC Series, Briefing Notes Subseries, DDEL, Abilene.

\footnote{131} Letter from William Penny, U.K. Atomic Energy Authority (Harwell) to Sir Patrick Dean, Foreign Office, December 30, 1959, FO371/149269, PRO. See also Secret Memo from P. Dean to William Penney, Harwell, January 1, 1960, FO371/149269, PRO, Kew.
Assistant, told the British ambassador that he himself, Secretary Herter, and James Wadsworth, all agreed that the "Russians seriously want an agreement."\(^{132}\)

Although the president was aware of these views, they did not have any impact on his decision regarding the American position on testing. On December 29, during a press conference, Eisenhower placed the blame for the impasse in Geneva squarely on the Russians. The negotiations had broken down, according to the president, because of the "recent unwillingness on the part of the politically guided Soviet experts to give serious scientific consideration to the effectiveness of seismic techniques for the detection of underground nuclear explosions." The American moratorium would expire December 31, 1959. After that time, the U.S. would feel free to resume nuclear testing.\(^{133}\)

In its announcement, the British government diverged from the U.S. by indicating that, although it felt free to resume testing, it would not do so as long as "useful discussions" continued in Geneva. In the U.K., the Opposition and the press were very critical of Eisenhower's decision.\(^{134}\)

In Canada, the response was similarly negative. Asked by reporters to comment on the President's decision, External


\(^{133}\) Press Statement by Eisenhower, December 29, 1959, NSC Series, Briefing Notes Subseries, DDEL, Abilene.

\(^{134}\) Telegraph from the American Embassy in London (Barbour) to the Secretary of State, December 31, 1959, DSRG 59, 711.5611/12-3159, NA, Washington.
Affairs Minister Howard Green replied that, "We are against nuclear tests of any kind, and our position has been made clear on this point." Also responding to press questions, Hazen Argue, leader of the Cooperative Commonwealth Federation Party in the House of Commons, stated that his party believed that "any decision by the U.S. to resume nuclear tests [was] a serious mistake" that would only "weaken" the Western position at the forthcoming summit.\textsuperscript{135}

In the United States, there was also some criticism. Democratic Senator Hubert Humphrey and his aide for disarmament problems, James Boyd, felt "despair" when they heard Eisenhower's announcement. In their view, it was all very well for the president to make "platitudinous speeches about peace" but what was really required was for him to gain greater control in Washington where the "protagonists for increased armaments, a new series of nuclear tests and the more widespread distribution of American nuclear weapons were still in a commanding position." Unless Eisenhower was willing to take a stand against those with a vested interest in the buildup of nuclear weapons, they argued, there would be no nuclear tests agreement and no progress whatsoever on disarmament. Although both Humphrey and Boyd found this to be an "appalling prospect," they were not hopeful that the president would change his course.\textsuperscript{136}

\textsuperscript{135} Telegram from the American Embassy in Ottawa (Wiggleworth) to the Secretary of State, December 31, 1959, DSRG 59, 711.5611/12-3159, NA, Washington.

\textsuperscript{136} Memo from David Ormsby-Gore re: Conversation with James Boyd, to the Head of the Atomic Energy Department, January 5,
The pessimism conveyed by Boyd and Humphrey was understandable. Throughout 1959, Eisenhower was under a lot of international pressure to change the American policy on testing. Reinforced by countries like Japan, India and Canada, the Soviet Union and Great Britain continued to seek a comprehensive test ban treaty. Within the administration, this goal was encouraged by the State Department, the President’s Science Advisory Committee and the American delegation in Geneva. As a result of this pressure, the president did make some changes in the American position. Eisenhower finally dropped the link between an agreement on testing and general disarmament and he approved the atmospheric test ban proposal. Nevertheless, these shifts did not result in any fundamental alteration in U.S. policy. In order to get support for his decision to abandon the link, Eisenhower cut a deal with the Pentagon and the Atomic Energy Commission. He approved the introduction of the "duration article" into the negotiations at Geneva even though, as the British pointed out, it had no chance of being accepted by the Soviet Union. Eisenhower’s support of the limited test ban proposal also failed to result in any meaningful shift in the American position. Although such a ban would reduce the health hazards and public relations problems caused by above-ground testing, it would do nothing to help prevent the continuation of the arms race or the proliferation of nuclear weapons. As the British predicted, it might even lead to "competitive underground

1960, FO371/149269, PRO, Kew.
testing."

By the end of the year, American public opinion began to shift in favour of an accord which would extend the moratorium. Nevertheless, the president refused to pursue a Comprehensive Test Ban treaty at Geneva. At the time, he knew that members of both the House of Representatives and the Senate opposed a comprehensive ban because they worried that without an effective control system in place the Russians would cheat on such an accord. Distrustful of the Soviet Union himself and supportive of the arguments put forward by the defence bureaucracies, Eisenhower in December 1959 announced his willingness to resume, rather than ban, testing. This decision made any meaningful agreement at Geneva the following year even more unlikely.
Chapter Eleven

COLLAPSE

From mid-January 1960 until the U-2 incident the following May, representatives from the United States, Britain and the Soviet Union continued to participate in the Nuclear Test Ban Talks in Geneva. This was a very frustrating process for the delegates and not much was accomplished. According to some historians, the American president remained committed to a test ban during this period. In Ambrose’s view, Eisenhower was now "more willing to take some risks to achieve a first step toward a test ban ... than he had ever been before." Similarly, Divine believes that on the eve of the Paris summit in May, "Ike was ready to negotiate a Comprehensive Test Ban Treaty which would be a significant step toward bringing the runaway arms race under control." However, there is little evidence to support these claims. At the time, Great Britain and the Soviet Union continued to seek a comprehensive test ban agreement. Within the American administration, this goal was supported by the State Department, the President’s Science Advisory Committee, and the delegation in Geneva. The president, however, showed little interest in such a treaty. Instead, he approved plans devised by the Atomic Energy Commission and the Department of Defense to

resume underground testing.

In late 1959, Eisenhower had announced that the United States felt free to resume testing. As a result of the criticism produced by this announcement, the president realized that international opinion would disapprove if the U.S. unilaterally withdrew from the negotiations in Geneva. He also knew, based on a Gallup poll taken in November 1959, that domestic public opinion would probably not favour such a move. Therefore, in early 1960, it was important for the administration to come up with a proposal that would make it appear that the U.S. was still interested in the talks, but at the same time, allow it to restart underground testing. During the first week of January, 1960, while the Geneva talks were still in recess, the administration began to develop the "threshold" concept. During a meeting at Augusta, the president approved a proposal which would allow underground tests below a "threshold" of 4.75 on the Richter Scale (approx. twenty kilotons) but ban all other testing underground or in the atmosphere. The AEC, DOD and JCS liked this idea because, if it was accepted, it would allow the U.S. to improve its image, continue underground testing, and gain on-site inspection in the U.S.S.R. The State Department was less enthusiastic, as was the President's Special Assistant, Gordon Gray. In Gray's view, it was highly unlikely that the Soviet

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2 Memo of Conversation at the White House re: Course of Action to be Pursued upon Resumption of the Nuclear Tests Conference, January 8, 1959, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.
Union would accept the threshold concept. What is more, Eisenhower would occupy an awkward moral position if he supported a plan which would actually permit the U.S. to carry out "all the testing we wanted to do." As Gray pointed out, "this might be good Defence policy, but [it] was not good policy for the president."  

When the American delegation returned to the talks on January 12, they held an informal meeting with the British to inform them of the administration's decision to pursue the "threshold" proposal. The immediate reaction of the U.K. was negative. The U.S. delegation reported that the British were "violently opposed" to the threshold plan.  

In the Foreign Office, Selwyn Lloyd worried that the American proposal would be so unacceptable to the Russians as to cause them to break off the negotiations, leaving the "odium" of world opinion to fall largely on the West.  

In a message to Herter, the Foreign Secretary indicated that, in spite of the technical difficulties raised by the U.S., he still believed that it was in the best interest of the West to negotiate an agreement with the Russians under which "all tests would cease."  

3 Memo re: Threshold Proposal for the Nuclear Test Negotiations, January 12, 1960, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.  


6 Secret Telegram from Selwyn Lloyd to Secretary Herter, January 14, 1960, FO371/149273, PRO, Kew.
"firmly" in favour of a comprehensive treaty. Lloyd asked the U.S. to reconsider the British suggestion that any proposal to the Soviet Union include a ban (or at least a moratorium) on underground testing, the case for this having steadily strengthened over recent months. If the West failed to achieve an accord with the Russians in Geneva, Lloyd believed that the prospects of reaching any other agreements on disarmament in the near future were "negligible." Furthermore, he was convinced that the only way to prevent proliferation was through a comprehensive accord on testing. In his words, "agreement on the controlled cessation of tests seems to us the quickest and most effective way of discouraging any other powers from starting on this vast enterprise."

From the Soviet Union, Ambassador Bohlen advised the State Department to support the British proposal. From his perspective, an agreement on the moratorium was essential to achieving a treaty with the Russians. Despite these recommendations, the pro-testing forces prevailed in the U.S. On February 2, Secretary of State Herter sent a response to Lloyd rejecting the British proposal, based on the standard argument that the U.S. would only agree to cease testing in areas which

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7 Synopsis of State and Intelligence Material Reported to the President, January 12, 1960, Diary Series, AWF, DDEL, Abilene.


9 Telegram from Selwyn Lloyd to Secretary Herter, January 27, 1960, FO371/149276, PRO, Kew.

10 Divine, Blowing on the Wind, 297.
could be effectively controlled. Without this assurance, he maintained, the Senate would never ratify an accord. A day later, he ominously warned the British ambassador in Washington that "any open split between us on the nuclear testing issue might have repercussions on our defence cooperation in the nuclear field."

At Geneva, David Ormsby-Gore, who returned as the head negotiator for the U.K. delegation, continued to hope that his government would pursue a comprehensive test ban. Even if this involved some risks, he believed that the "prize was so great that these risks might have to be taken."

Back in the Foreign Office, however, British officials were becoming increasingly pessimistic about the possibility of achieving a comprehensive agreement due to American recalcitrance. From their perspective, it was clear that the Eisenhower administration was not going to change its policy. Perhaps also worried about Herter's warning (which implied a threat to the British-American relationship regarding the sharing of nuclear information), the Foreign Office decided that it would have to acquiesce, for the time being, to the American position. On February 8, Selwyn Lloyd wrote a

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11 Telegram from Secretary Herter to Selwyn Lloyd, February 2, 1960, FO371/149276, PRO, Kew.


13 Letter from David Ormsby-Gore to the Head of the Atomic Energy and Disarmament Department, February 4, 1960, FO371/149276, PRO, Kew.

friendly letter to the State Department indicating that the British would support the U.S. as "far as they possibly could," on the threshold proposal.¹⁵

On February 11, at the 170th Meeting of the Nuclear Tests Conference at Geneva, the U.S. delegation presented the new proposal, advocating a ban on nuclear tests in the atmosphere, in the oceans, in outer space and underground (above the threshold). The U.K. delegation supported this proposal, indicating that this was a decision that had been reached only "reluctantly." The British government still had its sights set on a permanent ban on all nuclear weapons tests. The Soviet delegation found the American offer completely unacceptable, as expected, and brushed it aside as merely a way for the U.S. to "cover up its intention to resume tests."¹⁶

Although the Soviets initially rejected the threshold plan, they made concessions in the negotiations regarding the inspection system. On February 16, the Russian delegation agreed to the British suggestion to set a quota on the number of inspections permitted each year. Despite this concession, the U.S. administration failed to respond positively. The president was particularly unenthusiastic. "You get into the old numbers racket that everybody seems to love so much," he told reporters, "just exactly what is adequate would be a very difficult

¹⁵ Memo of Conversation between Secretary Herter and the President, February 8, 1960, Diary Series, AWF, DDEL, Abilene.

thing.  

In early March, Khrushchev sent a letter to Eisenhower conveying his concerns about the proliferation of nuclear weapons to countries like Germany. He asked the president to reconsider the American position on testing and the policy of supplying nuclear weapons to the NATO allies. The president, however, remained firm in his decision not to pursue a comprehensive test ban and the talks in Geneva stalled once again. According to James Wadsworth, the head American negotiator, there was so much pressure being exercised in Washington by the anti-treaty forces that Farley and others in the State Department (who favoured a comprehensive ban) had decided that for the time being their wisest tactic was to "remain quiescent." As a result, the U.S. delegates found themselves in the frustrating position of having to be "negative and unforthcoming on almost everything" introduced by the other delegations at Geneva. Wadsworth was increasingly convinced that the opponents of a "treaty of any form" were winning the battle back in Washington. Even the American delegation was coming under heavy criticism for being too soft in the negotiations. Opponents of a treaty were now suggesting that the U.S. delegation was "too weak" and "too willing to give in to the Russians." So powerful were these opposing forces that Wadsworth feared that he might be replaced because of his belief that a treaty was in the U.S. interest. He


felt the British had a right to know of these developments because of the close and loyal collaboration that had existed between the U.S. and U.K. delegations over the past seventeen months. Unless there was a drastic change in the atmosphere in the administration, Wadsworth feared that the current state of affairs might last for weeks or even months. According to the information he had received from Washington, the State Department was expecting a period of "prolonged stone-walling."\textsuperscript{19}

Despite the lack of cooperation shown by United States, the British delegation reported to the Foreign Office that the Soviets "continue to be extraordinarily forbearing in their attitude to Wadsworth and his delegation." Tsarapkin was letting pass repeated opportunities to embarrass Wadsworth over the apparent willingness of the U.S. to resume testing and the slowness, or absence, of any positive instructions from Washington.\textsuperscript{20} In order to keep the conference going, the leader of the Russian delegation had intimated that his government might even consider the threshold proposal, if it was coupled with the British moratorium idea.\textsuperscript{21}

As a result of the Soviet attitude, the British Foreign Secretary hoped that the U.S. would eventually have to "face up to the issue" of a comprehensive test ban treaty. Neither the


\textsuperscript{20} Ibid.

\textsuperscript{21} Memo from Selwyn Lloyd to the Prime Minister, February 23, 1960, FO371/149280, PRO, Kew.
Foreign Office nor the U.K. delegation in Geneva was sanguine about this possibility. When the U.S. proposed another recess in the talks, the Foreign Office interpreted the request as meaning that the Eisenhower administration was "unable or unwilling to make up their minds about a whole range of problems, [like inspection] which had to be settled before a treaty could be achieved." After a visit to Washington toward the end of February, Ormsby-Gore concluded that the president himself "preferred not to have to take any decision" about how to proceed in the negotiations.22

On March 8, the U.K. delegates reported from Geneva that the conference "seemed to be drying up for want of material." From their perspective, what was really needed was some move from the Americans on the moratorium issue.23 According to the British embassy in Washington, the "whole State Department was pretty well sold on the idea of a moratorium, up to and including [Secretary] Herter." The Director of the CIA, Allen Dulles, and the President's Science Advisor, George Kistiakowsky, were also convinced that this was the best way to proceed in the negotiations. They believed that the Soviet Union stood to lose more (militarily, at least) from an agreement not to resume underground testing than did the U.S. Those who favoured an


accord were not prepared, however, to face an "all-out row" with the agencies vehemently opposed, the Department of Defense and the Atomic Energy Commission, which refused to budge from their view that no agreement was attainable with the U.S.S.R. on underground tests below the threshold since "it was impossible to be certain that the Russians would not cheat."  

On March 14, a group of seventeen prominent American scientists undermined the defence bureaucracies' argument when they published a paper entitled "Nuclear Tests and National Security." After careful study, these scientists, who were all members of the Democratic Advisory Council's Committee on Science and Technology, had concluded that it was possible to design a control system which would make it almost impossible for the Soviet Union to cheat on an agreement. Spacing seismic stations approximately 250 miles apart, they claimed, would provide an adequate monitoring of illicit underground tests. They therefore encouraged the administration to negotiate an accord with the other nuclear powers which would include the banning of underground testing.  

In addition to these American scientists, the British and Soviet governments both decided to put more pressure on the American administration. On March 19, Khrushchev sent a letter to Eisenhower signifying his willingness to accept a treaty banning testing in the air, at high altitudes, underwater and

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underground above the threshold, provided that the United States would accept a moratorium on underground tests below the threshold. At Geneva, the Russians elaborated on this proposal, suggesting that the moratorium should last at least four years, and that on-site inspection would cover tests below the threshold as well as above it. The British considered the Soviet proposal a significant breakthrough in the negotiations. Two days after the Soviets made the offer, the British prime minister phoned Eisenhower to convince him to support a moratorium on underground testing. The president was the "man in history," Macmillan argued, with the power to "put an end to all this." 

In Washington, the secretary of state reminded the administration that, in the face of growing opposition to testing throughout the world, the U.S. had to come up with a positive response to the Soviet concession. Eisenhower did not agree with either Macmillan or Herter. In his reply to the British leader, the president attempted to explain why he could not

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26 Original Text of Chairman Khrushchev's Letter to the President as Received from the Soviet Embassy, March 21, 1960, International Series, WHOSS, DDEL; Summary of Points Made in Khrushchev's Letter, March 21, 1960, International Series, WHOSS, DDEL; Memo of Conversation with the President, Subject Series, State Department Subseries, March 21, 1960, DDEL, Abilene.


28 Richard Hewlett and Jack Holl, _Atoms for Peace and War, 1953-61_ (Berkeley, 1989), 559.

29 Telephone Call from Macmillan to Eisenhower, March 21, 1960, Diary Series, AWF, DDEL, Abilene.

30 Hewlett and Holl, _Atoms for Peace and War, 559._
support the proposal favoured by the U.K. and the U.S.S.R. Since his term was up the following January, Eisenhower argued, he probably would not have the time to get an agreement on testing through the Senate, especially with the election campaign beginning in late June.  

Macmillan was very disappointed by the president's reaction. For a long time the prime minister had been urging the U.S. to accept the idea of a moratorium on the smaller underground tests. But he was now convinced beyond doubt that the administration's policy was being determined by the Atomic Energy Commission and the Pentagon.  

On March 22, the Committee of Principals met to discuss the American reply to the most recent Soviet offer. The Chairman of the AEC, John McCone, made it known right from the outset that he was "violently opposed" to any acceptance of this proposal. If the West accepted this offer, he argued, the Soviet Union would proceed to conduct clandestine tests, leaving the U.S. a "second class nuclear power." Although the Department of Defense supported the Atomic Energy Commission's viewpoint, the State Department disagreed. The secretary of state was beginning to worry that no accord at all would be be reached at Geneva. In Herter's view, it was more to the U.S. advantage to accept an imperfect agreement than "to have nothing and perhaps leave the field open for the whole world to develop and test  

31 Telephone Call from Macmillan to Eisenhower, March 21, 1960, Diary Series, AWF, DDEL, Abilene.  

32 Divine, Blowing on the Wind, 300.  

33 Meeting of the Principals, March 22, 1960, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.
nuclear weapons."34 During conversations with Eisenhower, Herter emphasized the political questions involved in this decision. The British were pressing hard for the U.S. to accept the Soviet proposal and in general, the international state of mind was very opposed to the resumption of nuclear testing.35

Although he was aware of the international political ramifications of the U.S. position, Eisenhower made it clear to Herter that he was not planning to accept a ban on underground testing without "adequate inspection." On the one hand, the president believed that the Soviets were "really ready [to reach an agreement] to stop testing." On the other, he was suspicious of their motivations. Perhaps, Eisenhower reasoned, the Russians planned to continue testing after an accord was reached in some place, like China, not covered by the inspection system. Or, maybe, they were so confident in their propaganda machine that they thought they could "lie away" any violation that was discovered. The president refused to do anything that might risk national security, but he believed that there might be a way out of the political difficulty caused by the American position on testing. Although he was not prepared to accept the Soviet proposal, what if the U.S. stated that it would resume

34 Meeting of Principals, March 23, 1960, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.

35 Memos of Conversation between Secretary Herter and the President, March 23, and 24, 1960, Subject Series, State Department Subseries, WHOSS, DDEL, Abilene.
underground nuclear tests, but only for "peaceful purposes"?36

For about a year, the AEC had been putting forth various proposals for "Operation Plowshare," the program designed to develop the "peaceful uses of nuclear weapons." Many of these proposals were in the planning process but three are worth mentioning. The first, planned for September 1960, proposed that two 200 kiloton nuclear detonations be carried out to create a harbour in Alaska. Three hundred thousand dollars had already been spent on this project, even though the AEC admitted that it was "unable to get anyone to state a requirement for, or show any interest in, the formation or use of such a harbour in Alaska."

For the second project, the AEC planned to detonate several 10 Kiloton nuclear devices in the oil shales of Colorado, Wyoming, Utah, and Alberta, in order to extract oil. Not surprisingly, no oil companies had evinced any interest in this proposal. The third project, dubbed "Gnome" and planned for May of 1960, would involve detonating several nuclear weapons in a salt deposit in New Mexico. Apparently, Gnome's purpose was to investigate the possibility of producing both industrial power and nuclear materials. Although a research team from Dupont had already decided that this was a very uneconomical proposal, the AEC was going ahead, based on its prediction that the construction of the

36 Ibid. See also Memo of Conversation with the President, March 24, Subject Series, State Department Subseries, WHOSS, DDEL, Abilene.
site in New Mexico would only cost one million dollars.37

While the negotiations continued in Geneva, the AEC decided to publicly announce its plans for the "Gnome" Project. When McCone discussed this announcement with the president, he reiterated his concern about the impact that an agreement on testing would have on the Commission's weapons labs. He now believed that the "greatest damage to the U.S. of a further test moratorium would be the effect on the AEC's laboratories."38

Sympathetic to McCone's point of view, Eisenhower approved the press release regarding "Gnome," even though he had some concerns. As he pointed out, the main difficulty with this announcement was that it "almost serves notice to the world that we have given up obtaining an overall [comprehensive] nuclear test ban agreement."39

Despite the negative American attitude, the British

37 Report from H.J. Watters to James Killian, "AEC and DOD Plans for Nuclear Tests," April 7, 1959, PSAC, DDEL; Telegram from Arthur Minnich to General Goodpaster, February 29, 1960, Subject Series, Alphabetical Subseries, WHOSS, DDEL. The AEC also had plans to use nuclear explosions to build a trans-isthmian canal through Central America. The president was particularly impressed with a plan to dig a canal across the Yucatan Peninsula, "if negotiations with Mexico could be worked out." See AEC Report, "Nuclear Construction of a Sea Level Canal," January 1960, OSATRG 39, Box 107, NA, Washington; Cabinet Meeting Minutes, April 29, 1960, Cabinet Series, AWF, DDEL; Letter from Edward Teller to the President, May 11, 1960, Cabinet Series, AWF, DDEL; Memo of Conversation with the President, July 7, 1960, Diary Series, AWF, DDEL, Abilene.

38 Memo from Karl G. Harr, Special Assistant to the President, to Wilton B. Persons, Assistant to the President, March 8, 1960, Subject Series, White House Subseries, DDEL, Abilene.

39 Memo of Conversation with the President, March 10, 1960, Subject Series, Alphabetical Subseries, WHOSS, DDEL, Abilene.
government still hoped that an accord was achievable with the Soviet Union. The American ambassador in London, John Hay Whitney, sent a message to the State Department emphasizing the "strength and breadth" of British support for the latest Soviet proposal (for a moratorium below the threshold). Because of the extent of anti-nuclear public and political clamour in Britain, the embassy believed that it would be extremely difficult, if not impossible, for the government there to resume even small underground tests. There was heavy pressure on the British government to accept the Soviet proposal in order to gain a comprehensive agreement. If the U.S. refused to negotiate on this basis, the embassy warned, there would be very little understanding or support for this decision in the U.K.  

On March 25, Macmillan journeyed to Camp David to persuade Eisenhower to accept the Soviet proposal. From one end of the political spectrum to the other, the British press strongly supported this move. According to the pro-conservative Daily Mail, "into the prime minister's hands has been thrust suddenly the hopes of the West -- that an agreed British-American policy can be achieved which will lead eventually to a world-wide end to nuclear tests." The pro-Labour Daily Herald asked Macmillan to "come back with an agreement to stop all tests ... Make it clear that no other decision will be acceptable to the British people, or excusable to the world." The pro-Liberal Guardian warned that

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41 Secret Telegram from Foreign Office, March 29, 1960, FO371/149284, PRO, Kew.
if this opportunity to reach an agreement with the Russians was missed this time, "another may not come for years. By then, nuclear weapons will be more numerous, more difficult to control, and in the hands of further nations ... if, that is, we survive so long."42

Unfortunately, Macmillan's meeting with Eisenhower did not result in any significant change in American policy. During the discussion of the nuclear test negotiations, the president brought up the question of Germany. In his view, the Soviets had a real fear of a reunited, rearmed Germany. The State Department had suggested that a concession by the U.S. on the moratorium proposal might result in a more accommodating Soviet position on Germany. Although the president told Macmillan that he was considering this possibility, he also emphasized his desire to maintain a powerful Germany in order to balance the strength of the Soviet Union. His main concern was that "if we let the Germans down, they might shift their own position and even go neutralistic." If this happened, Eisenhower worried that there would be no power capable of holding the "central bastion in Europe." The prime minister did not share the president's apprehensions about a shift in Germany's alignment. The Germans now had an effective military build-up, "liked playing soldier again" and were "not likely to change their role." Eisenhower then brought up the question of China. If the administration

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decided to go forward with a nuclear testing agreement at Geneva, it would expect China to adhere to the treaty at the appropriate time. No doubt extremely frustrated by this time, Macmillan asked whether the U.S. had finally decided to "recognize the existence of China." Although the meeting ended inconclusively, both leaders agreed that the unresolved issues related to the negotiations in Geneva, such as the number of on-site inspections and the duration of the moratorium, should be discussed at the upcoming summit in Paris.⁴³

In his response to Khrushchev on April 1, the president explained his concerns about the Soviet proposal. The length of the proposed moratorium on small underground tests was, in his view, excessive. In addition, the U.S. still believed that a number of issues remained to be resolved prior to an accord. In order to improve the control system, especially regarding underground tests, he asked the U.S.S.R. to agree to a joint research program involving nuclear explosions. He also stressed the importance of working out "safeguarded procedures" for carrying out nuclear detonations for "peaceful purposes." Although the Soviet leader seemed to believe that a cessation of nuclear weapons testing would help prevent proliferation and retard the arms race, the president disagreed. According to Eisenhower, what was really needed was an agreement to cease the

production of all fissionable material for weapons purposes."

Since no further progress was made in Geneva, the British government hoped that it might persuade the U.S. to consider the unresolved issues -- the moratorium and the inspection system -- at the Paris summit, scheduled to start on May 16. The prime minister was not confident that the summit could accomplish much, however. In a message to his Foreign Secretary, Macmillan stated his fear that the Americans would "do everything they [could] to make this conference fail. I know this is not true of Wadsworth, but it is true both of the Pentagon and the Atomic Energy people."45

In the United States, meanwhile, the pro-testing forces were mounting an attack against any agreement with the Russians at Paris. In April, the Joint Committee on Atomic Energy, a body known for its extreme suspicion of the the Soviets,46 held hearings in Washington. Under the Chairmanship of Representative Chet Holifield, a Democrat from California who had consistently opposed an accord with the Russians, witnesses testified on the problems involved in detecting underground tests. Holifield restricted the testimony to the detection issue only, preventing witnesses like Hans Bethe from discussing the anticipated political and diplomatic advantages of a test ban accord. When

45 Letter from Eisenhower to Khrushchev, April 1, 1960, International Series, WHOSS, DDEL, Abilene.

46 Message from Harold Macmillan to Secretary Lloyd, April 9, 1960, FO371/149285, PRO, Kew.

Bethe argued that it was possible to design an adequate control system, scientists such as Edward Teller and Albert Latter brought up the "decoupling" theory as proof that an agreement with the Russians was impossible. Exasperated, Bethe declared that, "I think we are all behaving like a bunch of lunatics to take any such thing as the Big Hole [theory] seriously."

Apparently, John McCone was the prime mover behind these hearings. According to George Kistiakowsky, the AEC Chairman hoped that the testimonies would reinforce opinion in the Senate against any agreement with the Soviet Union. The hearings served the AEC's purpose well. When they were over, Senate support for a treaty was more remote than ever.\footnote{Divine, \textit{Blowing on the Wind}, 306-9.}

Despite this pessimistic mood in the United States, Secretary Herter announced that the administration would give disarmament priority at the upcoming summit. James Wadsworth, at home during another recess in the Geneva talks, expressed his hope that the heads of government would reach agreement on the moratorium and inspection issues so that the negotiations could move forward. The president was more guarded in his answers to the press on April 27. He refused to comment specifically on the test ban issue, but he told reporters that at Paris he hoped to achieve an "ease of tension, some evidence that we are coming closer together ... so that people have a right to feel a little more confident in the world in which they are living and in its
The U-2 incident made any progress in the negotiations at Paris extremely unlikely. Since 1956, the president had authorized the CIA to fly spy planes deep into Soviet airspace. From West Germany, Norway, Turkey, Pakistan, Japan, Alaska and elsewhere, former Air Force pilots had soared in black, unmarked planes 70,000 feet above Russian air bases, missile-launching pads, factories, and nuclear testing grounds. As Director of Central Intelligence Allen Dulles later boasted, "I was able to get a look at every blade of grass in the Soviet Union." 

Throughout 1959 and into 1960, Eisenhower had become increasingly reluctant to approve additional U-2 missions. During one meeting with his intelligence advisors in early 1959, he told them that he wanted to decrease the number of reconnaissance flights on the grounds that they presented "undue provocation" to the Soviet Union. Nothing, he stated, would make him request the authority to declare war more quickly than a violation of U.S. air space. About a year later, the topic came up again when the president's new Board of Consultants on Foreign Intelligence Activities recommended that overflights be utilized to the "maximum degree possible." Although he approved more flights, Eisenhower urged caution at this time because he

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"Top Secret Memo for the Record by John D. Eisenhower, February 12, 1959, Subject Series, Alphabetical Subseries, WHOSS, DDEL, Abilene."
feared that the "embarrassment to us will be great if one crashes." On April 25, Richard Bissell of the CIA asked the president to approve another mission. With the summit approaching, it would be politically disastrous if something went wrong, but Eisenhower decided to take the risk. Bissell was informed that "one additional operation may be undertaken, provided it is carried out prior to May 1. No operation is to be carried out after May 1." On May 1, the American U-2 piloted by Gary Francis Powers was downed over Sverdlovsk, the tenth largest city in the Soviet Union. When Eisenhower heard that Powers was missing, he authorized his aides to issue a disingenuous statement that the plane was a NASA weather plane that had strayed accidentally into Soviet air space. The administration stuck to this lie even after Khrushchev announced on May 5 that the Soviets had downed an American spy plane. But when the Russian leader produced both the pilot and the wreckage of his U-2 in Moscow the next day, the president was forced to acknowledge that the U.S. had been carrying out reconnaissance flights over the Soviet Union. On May 9, the secretary of state issued a statement confirming that the U-2 was on an American espionage mission, but he justified it on the grounds that such flights were necessary to protect the U.S.

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51 Top Secret Memo for the Record by General Goodpaster, February 8, 1960, Subject Series, Alphabetical Subseries, WHOSS, DDEL, Abilene.

52 Memo for the Record from A.J. Goodpaster, April 25, 1960, Subject Series, Alphabetical Subseries, DDEL, Abilene.

53 Beshchloss, Mayday, 25.
against a surprise Soviet nuclear attack. As Michael Beschloss points out, this was the first time that the American government had "publicly admitted that it had committed espionage in peacetime and deceived the world about it."55

Although relations with the Soviets were badly strained, the administration agreed to carry on the negotiations in Geneva. It also decided to announce the resumption of nuclear tests under "Project Vela" on May 11. According to the United States, these tests were "in no way related to nuclear weapons development" and would only be conducted to improve the detection capabilities of a control system for underground tests. Since the U.S.S.R. had refused to participate in any research program involving nuclear explosives, the U.S. was preparing to go ahead on its own.56 This public statement predictably caused concern in the Soviet Union and Britain as well as at the Test Ban conference in Geneva, where delegates had received no advance notice. The American press was also critical. Since the negotiations in Geneva were still going on, the Minneapolis Tribune found the announcement, "confusing, to say the least." According to the Charlotte Observer, the statement was a sign that the AEC and Pentagon forces were "still actively trying to block a treaty." As the Detroit News pointed out, the announcement "could not have

54 Divine, Blowing on the Wind, 311-12; Divine, Eisenhower and the Cold War, 149. For the text of Herter's speech, see Beschloss, Mayday, 257-8.

55 Beschloss, Mayday, 249.

been timed worse than just after the [spy] plane embarrassment." The U.S. was now the only one "among the Big Three committed to test resumption."57

Despite this American announcement, and the admission of spying, the Soviets decided to go ahead with the summit. The president was informed that the CIA did "not believe that Khrushchev [would] seek to exploit the U-2 incident in Paris to a point that might endanger his higher priority goals of obtaining some satisfaction on Berlin, disarmament, and a nuclear test ban."58 Nevertheless, when the Soviet leader arrived on May 14, he told Harold Macmillan and Charles de Gaulle that he expected a personal apology from Eisenhower and an assurance that the United States would never again send a spy plane over Soviet soil. Although the president, who arrived in Paris a day later, had already ordered the suspension of further U-2 flights, he was unwilling to make the public apology and commitments demanded by the Soviet leader. On May 16, Khrushchev spoke first at the conference, denouncing the American leader and suggesting that the summit be rescheduled after the president's term in office had ended. When Eisenhower's attempts to mollify the Soviet leader failed, he returned to Washington.59

Many historians contend that the president was on the verge

57 Telegram from State Department re: American News and Comment, to the American Consul in Geneva, May 26, 1960, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.

58 Peter Grose, Gentleman Spy: the Life of Allen Dulles (Boston, 1994), 488.

59 Divine, Blowing on the Wind, 312-313.
of a major breakthrough in Geneva on the eve of the Paris summit. According to Ambrose: "Eisenhower was prepared to go to Paris to seek a genuine accord. Never in the Cold War did one seem closer. A president of the U.S. was on the verge of trusting the Russians in the most critical and dangerous field, nuclear testing." Divine believes that Eisenhower left Paris "saddened by the realization that the unfortunate U-2 incident had destroyed his fond hopes for agreement on at least the essentials of a test ban treaty." At the time, the president told Kistiakowsky that the "stupid U-2 mess had ruined all of his efforts" to end the Cold War. Eisenhower had looked forward to the summit with great optimism. Indeed, on the eve of the summit, he was "ready," in Divine's view, "to negotiate a comprehensive test ban treaty," as a way to reduce tensions in the world and bring the arms race under control. According to Hewlett and Holl, Eisenhower's "ardent pursuit of a nuclear test ban" faded after the collapse of the summit. Appleby supports this perspective. Although it was not clear that an accord could have been reached in Geneva anyway due to "Soviet intransigence," Appleby believes that the U-2 incident was the "death knell" for all of Eisenhower's arms control efforts, including his quest for

60 Ambrose, Eisenhower, 567.
61 Divine, Blowing on the Wind, 313-14.
62 Divine, Eisenhower and the Cold War, 146, 152-3.
63 Hewlett and Holl, Atoms for Peace and War, 561.
an agreement on testing."

Although it is common to blame the breakdown of the test-ban negotiations on the U-2 incident, it is important to remember that on the eve of the Paris summit, the talks in Geneva were deadlocked. Despite significant concessions by both the Soviet Union and Great Britain, the U.S. had failed to respond positively during the negotiations. Perhaps Eisenhower did have a genuine desire to reach an accord, but there is no evidence to support the view that he was on the verge of introducing a proposal in favour of a Comprehensive Test Ban Treaty. Certainly, his record prior to the summit was not encouraging. During the eighteen months of negotiations at Geneva, he had not done anything to significantly change the American position on testing to facilitate a comprehensive ban. He had the authority to modify U.S. policy in this direction, but he consistently chose not to do so. Even if the Paris conference had not collapsed, a comprehensive test ban treaty was highly unlikely, due largely to the recalcitrance of the American administration.

After the summit collapsed, pressures continued to intensify in the United States for a resumption of testing. During a meeting with the president, Chairman McCone contended that there was no useful purpose in extending the talks in Geneva. Eisenhower agreed that "we cannot be too hopeful about these negotiations." During an NSC meeting on May 24, McCone

54 Appleby, "Eisenhower and Arms Control," 349, 418.

55 Memo of Conversation between the President and McCone, May 18, 1960, Diary Series, AWF, DDEL, Abilene.
repeated his view that the talks should be called off since they were keeping the U.S. in a "strait-jacket." The president agreed that "eventually, a time limit [must be set] for completion of the nuclear test negotiations."66

In Geneva, the American delegation received no positive instructions on how to proceed. Indeed, according to James Wadsworth, the NSC had decided that, if there was no progress in the negotiations by the following June, the U.S. would refuse to continue the talks. In a "strictly secret" conversation with British negotiator Michael Wright, Wadsworth suggested that this decision probably represented a further effort on the part of the DOD and AEC to wind up the conference by pinning the blame on the Russians for procrastinating and refusing to make concessions. Wadsworth went on to say that, "since it was no use blinking the fact that it was the U.S. government who were mainly responsible for the procrastination, it was hard to see how such a manoeuvre could in fact be successfully conducted before world opinion unless the Russians themselves took steps backwards." Both Wadsworth and Wright agreed that a study of the verbatim records of the conference would show that it was the American government who, from the beginning of the conference, had declined to make any concessions or proposals regarding important issues such as the inspection system or the moratorium.67

During a private conversation with Wright, Tsarapkin

66 Top Secret Minutes of the 445th Meeting of the NSC, May 24, 1960 NSC Series, AWF, DDEL, Abilene.

emphasized that the Soviet Union was still anxious to conclude a test ban treaty, before the autumn if possible. Although he was aware that the British government shared this hope, Tsarapkin feared that the American administration was unwilling to reach any agreement with his government.68

Back in Washington, the administration became embroiled in a debate about whether or not to go ahead with "Vela," the seismic research program which would involve nuclear explosives. Although the AEC was eager to begin this project, the State Department had serious reservations about it, especially while the negotiations were still in progress in Geneva. If "Vela" went ahead, it would be hard to convince the rest of the world that these tests were unrelated to the development of nuclear weapons. Secretary Herter feared that the talks in Geneva "were likely to end not because of Soviet obduracy but because of U.S. unwillingness to remove a valid basis for suspicion [regarding] our nuclear explosions under the seismic research program."69 At an NSC meeting, the State Department repeated its concerns about the impact that "Vela" would have on the negotiations in Geneva and international public opinion. Eisenhower did not share State's worries about the implications of this project, however. On the contrary, the president suggested that:

we might say to the Soviets, 'If you do not agree, then we will go ahead by ourselves' ... Our line could be that

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68 Telegram from Michael Wright, the U.K. Delegation in Geneva, to the Foreign Office, July 11, 1960, PO371/149294, PRO, Kew.

69 Minutes from the Meeting of Principals, June 30, 1960, NSC Series, Briefing Notes Subseries, WHOSANSA, DDEL, Abilene.
before the Geneva negotiations adjourned, we would say that we are going to begin to make our underground nuclear tests small ones and for the purpose of improving seismic instrumentation.70

In addition to the State Department, the President's Science Advisory Committee had serious qualms about the administration's decision to resume nuclear tests under Project "Vela." In a letter to the president, the PSAC stated its concern that the negotiations in Geneva would end "under circumstances which may cause a substantial portion of world opinion to place the blame for the failure on the U.S." From the committee's perspective, the technical issues involved in the seismic research program were not important enough to risk the breakup of the talks. The PSAC worried that U.S. motives would be called into question if it went ahead with its plans for "Vela" which was "obviously" designed to test military and weapons effects. "It would be unfortunate," in their opinion, "if weapons testing were resumed as a result of a program which itself was conceived to remove obstacles from the [achievement of a] treaty to cease such tests." According to the scientists, "Operation Plowshare," the use of nuclear explosives for peaceful purposes, which had presidential approval, presented a less immediate, but even more difficult problem than their use for seismic research. As they pointed out, the utilization of nuclear devices for peaceful uses depended upon the "most advanced thermonuclear weapon design." It would be impossible to include these "peaceful" devices in a

70 Top Secret Minutes of 455th NSC Meeting, August 12, 1960, NSC Series, AWF, DDEL, Abilene.
treaty without creating "an almost unlimited means of evading a ban on nuclear weapons development." Since there did not appear to be any economic or scientific reason why this program should be pursued in haste, the PSAC urged caution. In their view, both "Vela" and "Plowshare" would be difficult to justify to world opinion if they resulted in the breakdown of the Geneva negotiations and the resumption of nuclear weapons testing. 71

With the U.S. seemingly interested mainly in the resumption of nuclear testing, the talks in Geneva once again stalled and yet another recess began in early October. Since the conference had dragged on for nearly two years, the British Foreign Office thought the moment opportune to draw up an account of what had taken place so far. This report was classified "Secret and Guard" because of its discussion of the differences which had arisen between the U.K. and the U.S. during the negotiations. One of the features of the conference emphasized by the Foreign Office was the "persistence with which the Soviet government has sought an agreement; almost from the start it has been prepared to give ground for this purpose." Although it was only possible to guess at the reasons why the Russians had treated the conference as a serious negotiation, the Foreign Office believed that the most likely were their fears about proliferation and nuclear war. If this estimate was correct, then the basic Soviet motives for seeking an agreement had corresponded with those of the British government. "Throughout the negotiation, and during

71 Report from the PSAC to the President, July 12, 1960, Subject Series, Alphabetical Subseries, WHOSS, DDEL, Abilene.
several changes of heart and mind in Washington," the U.K. had "kept in clear view the advantages to be gained from success at Geneva and the dangers which would flow from failure." According to the Foreign Office, there were at least three good reasons why an accord on testing would be beneficial. First, the conclusion of a treaty would show that it was possible to reach agreement with the Soviet Union on an important and sensitive subject. Secondly, the existence of a treaty would act as a stabilizing influence on East-West relations. Thirdly, the functioning of a control system satisfactory to both sides would provide a model for other negotiations in the disarmament field.\footnote{Report on the Nuclear Tests Conference, Prepared by H.C. Hainworth, Foreign Office, October 13, 1960, FO371/149306, PRO, Kew.}

In contrast to the flexible attitudes of the British and Soviet governments, the U.S. had taken a much different approach to the negotiations. According to the report, the American government had initially agreed to participate in the conference in the belief that the Soviet Union would not negotiate seriously. When the U.S.S.R. frustrated this expectation by making concessions, doubts arose in the U.S. about the wisdom of proceeding at Geneva. Many Americans, both inside and outside the administration, feared entering into an accord which would limit U.S. freedom of action in the defence field; and many felt that any agreement desired by the Soviet government would inevitably damage U.S. interests. The negotiations were also hampered by the serious divisions within the administration
regarding the testing issue. In the Foreign Office’s view, this problem explained why "inaction has so often been preferred to action in Washington." Throughout the negotiations, the defence bureaucracies had argued in favour of an extreme version of the control system and introduced new technical data and theories in order to block the negotiating process. Their position resulted from a combination of motives, varying from extreme suspicion of the Soviet Union to a desire to resume nuclear testing.

In contrast, many respected scientists, like those on the President’s Advisory Committee, had never allowed the technical problems involved in a control system to dominate their point of view. Hans Bethe and others had advised the president not to allow the "new" seismic data or the "decoupling" theory to obstruct the negotiating process. Likewise, the State Department and the American delegation in Geneva had always placed less emphasis on the technical aspects of a control system and more stress on the political advantages to be gained from an accord with the other nuclear powers.\(^{73}\)

Despite the support for an agreement within the American administration, the forces in opposition were more powerful. Even when a hopeful development occurred at the conference, the British observed that the American delegates seemed always to react with extreme caution. Although the Foreign Office found this very irritating, the British realized that officials in all of the U.S. departments worried about being accused of being soft

\(^{73}\) Ibid.
towards the communists. In many government committees in Washington, like the Joint Committee on Atomic Energy, the suspicion of the U.S.S.R. remained extreme. This suspicion had led members of Congress and others to support the defence bureaucracies when they argued that the U.S. should, at all costs, including the breakdown of the conference, reserve the right to resume nuclear testing.\textsuperscript{74}

Although this report did not discuss the president, his role in the test ban negotiations was critical. In 1960, as before, Eisenhower had the authority to change American policy in a way that would have been conducive to an agreement on testing but he chose not to do so. Because he shared many of the same views as the defence bureaucracies regarding the untrustworthy nature of the Soviet Union, the desire for an "airtight" control system and the need to resume testing, he was unwilling to move the talks forward at Geneva. In the absence of any support from the Senate in favour of an agreement, he allowed the AEC and DOD to determine policy and as a result, the United States remained opposed to a Comprehensive Test Ban Treaty. After the U-2 incident and the collapse of the Paris summit, the talks in Geneva dragged on until December of 1960 but very little was

\textsuperscript{74} Ibid.
accomplished by the time that Eisenhower left office.
CONCLUSION

According to some historians, the Eisenhower administration seriously pursued an agreement to ban nuclear testing in the 1950s. The president in particular was deeply committed to an accord as a way of demilitarizing the containment doctrine, slowing down the arms race, and reaching a détente with the Soviet Union. Faced with the intransigent stance and stonewalling tactics of the Russians, these historians argue, the president agreed to modify U.S. policy in order to improve the chances of reaching an agreement with the Soviet Union.¹ This dissertation does not support this interpretation. Bolstering the post-revisionist perspective, the thesis concludes that the United States remained basically inflexible on the testing issue throughout the Eisenhower administration despite strong international pressure in favour of a comprehensive ban and significant shifts in the policies of the Soviet Union and Great Britain toward such a treaty.

In 1954, world attention focussed on American nuclear tests as a result of the Fukuryu Maru incident. In an attempt to mold

foreign and domestic public opinion after this episode, the Eisenhower administration deliberately underplayed the health and environmental effects of its nuclear tests in Nevada and the Pacific. Employing various public relations strategies, government agencies and representatives defused the testing issue in the United States by emphasizing the defensive, "peaceful," and "clean" nature of American nuclear explosions. These officials also justified the continuation of tests by claiming to protect the "Free World" from the Russian "menace"; in so doing, they ignored national intelligence estimates that downplayed the possibility of a surprise nuclear attack by the U.S.S.R. These strategies, combined with the deep-rooted fear of communism in the United States, helped convince the American people, including those who lived and worked near the proving grounds, to support the administration's nuclear testing program throughout much of the 1950s. When Democratic candidate Adlai Stevenson criticized the administration's position on testing in 1956, he was soundly defeated by Eisenhower in the presidential election. By late 1959, opinion polls indicated a shift in American opinion in favour of an extension of the moratorium in 1960. This change in opinion was not reflected in the Senate or House of Representatives, however. Distrustful of the Russians, Congress supported the administration's opposition to a Comprehensive Test Ban Treaty.

The rest of the world was not as supportive of the administration's policy. Concerned about the health and environmental effects of nuclear explosions, the governments of
Japan and India called for a moratorium on testing in 1954. In 1955, the Soviet Union began to put forward new proposals regarding disarmament and testing. This shift in Soviet policy was apparently driven by several motivations, including the desire to prevent further proliferation, decrease arms expenditures and improve relations with the West. The following year, Britain also began to show signs of flexibility in its position. British leaders were affected not only by international opinion but also by the growing public and political protest against testing in the U.K. As a result of this pressure, the British government attempted to persuade the Eisenhower administration to shift its policy in favour of a Comprehensive Test Ban Treaty. Finding the Americans recalcitrant, leaders in the U.K. were unwilling to openly break with the U.S. on this issue. In order to maintain their "special relationship" with the United States, which included the exchange of nuclear information, the British reluctantly acquiesced in the American position.

Throughout the 1950s, anxiety and protest against testing rose in Western Europe, Asia and elsewhere. Despite the growing international pressure in favour of an accord to end testing, the United States decided against any significant changes in its policy. As noted by the British Foreign Office, American inflexibility on the testing issue was the result of a seriously divided administration. In 1954, the State Department agreed with the defence bureaucracies that a moratorium on testing was not in the U.S. interest. However, as it became increasingly
aware of the political advantages to be gained from an agreement, the department, led by John Foster Dulles, began to call for a shift in American policy. During the Geneva Test Ban Talks, which began on October 31, 1958, State representatives encouraged the administration to seriously consider British and Soviet proposals for a Comprehensive Test Ban Treaty. Their stance was supported by the President’s Science Advisory Committee, the Central Intelligence Agency, and the American delegation in Geneva. In contrast, the Atomic Energy Commission and the Department of Defence vehemently opposed such an agreement. Distrustful of the Russians and seeking to secure their own interests, these bureaucracies introduced new technical obstacles into the negotiations. Apparently unconcerned about proliferation, and unpersuaded by the State Department’s views regarding the political advantages of a treaty, these agencies successfully blocked a comprehensive accord with the U.S.S.R.

The president had the authority to shift American policy in favour of the State Department and other agencies, but he was unwilling to do so. Supported by the public and Congress, Eisenhower invariably sided with the arguments presented by the AEC and DOD against a comprehensive test ban agreement. Despite rhetoric (in speeches and memoirs) about his commitment to disarmament, the president missed many opportunities to change the nuclear weapons policy of the United States. In 1955, he failed to respond positively when the Soviet Union (supported by Britain and France) made promising proposals regarding disarmament and testing. From 1955 until 1957, he failed to back
Harold Stassen, his Special Assistant for Disarmament, when he actively tried to revise U.S. policy in a more positive direction. Perhaps most importantly, during the Test Ban Talks from 1958 to 1960 he failed to support the State Department and the American delegation in Geneva in their desire to negotiate a Comprehensive Test Ban agreement with the U.K. and the U.S.S.R.

Eisenhower's stand on testing and disarmament in the 1950s is understandable. In the debates which took place in the administration over these matters, the president consistently chose to support the arguments made by the Atomic Energy Commission and the Department of Defence. He backed these bureaucracies, not only because they were more powerful than the other agencies in the area of national security and nuclear weapons, but also because he shared their ideological perspective. Like many of his advisors in the AEC and DOD, Eisenhower was affected by his military background and his experience during World War II and the Korean War. As a result of these experiences, he believed that military preparedness was essential to national security. From the beginning of his administration, he was committed to the "New Look" strategy which relied heavily on nuclear weapons to contain communist expansion. In order to maintain a sufficient retaliatory capacity, Eisenhower agreed with advisors like the trusted head of the Atomic Energy Commission, Lewis Strauss, that a wide variety of nuclear weapons had to be tested and developed.

The president also shared the defence bureaucracies' profound distrust of the Soviet Union and their concerns about
the "lessons of history." The experience of the past, particularly the interwar period, had shown that arms control agreements were dangerous. Instead of averting war, such accords had encouraged untrustworthy nations to rearm and expand. Like the members of the Senate and the House of Representatives, Eisenhower feared that the Russians would attempt to cheat on a Comprehensive Test Ban Treaty. Without a foolproof control system, he worried that such an accord might lead to "our Munich." Like his advisors from the Atomic Energy Commission and the Department of Defense, the president preferred the risks involved in proliferation and a nuclear arms race to those involved in an agreement with the Soviet Union that was less than airtight. As Eisenhower told Queen Frederika of Greece in 1958: "we cannot be naïve and put the whole safety of the free world in their [Soviet] hands." If the United States surrendered its lead in nuclear weaponry, he feared, it would be susceptible to communist expansion. The president "would not want to live, nor would he want his children or grandchildren to live, in a world where we were slaves of a Moscow Power," because at that point "you would pay too big a price to be alive."3

On January 17, 1961, in his celebrated Farewell Address

2 As Ernest May points out, the events of the 1930s left "a specially deep imprint" on American political and military leaders in the postwar world. By the 1950s, many policymakers in the U.S. had developed a vocabulary and a worldview which equated the Soviet Union with Nazi Germany. See Ernest May, "Lessons" of the Past: The Use and Misuse of History in American Foreign Policy (New York, 1973), 80-86.

before a national television audience, Eisenhower spoke about the dangers of the Cold War. "We face a hostile ideology," he declared, "global in scope, atheistic in character, ruthless in purpose, and insidious in method." The danger it posed was of "indefinite duration." As a result of this threat, a huge military establishment and an arms industry of vast proportions had been created in the United States. Although designed to protect freedom and democracy, there was, paradoxically, a danger that this "military-industrial complex" would undermine the very values that it was intended to protect. Therefore, Eisenhower warned that the American government "must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist."

The president was right, of course. A powerful "military-industrial complex" had grown up and it had become secretive and largely unaccountable to the democratic process. Still, what Eisenhower neglected to point out was that his own administration had significantly contributed to the growth of this complex by supporting a policy which advocated a vast nuclear weapons buildup and an extensive testing program. The numbers speak for themselves. Whereas at the beginning of his term in office, there were approximately 1,000 nuclear warheads in the American

stockpile, by the end there were approximately 18,500.\textsuperscript{5} The failure to achieve an agreement on testing during the late 1950s ensured that this buildup would continue. By the time that Eisenhower left office in 1961, the United States had achieved what David Rosenberg has described as a massive "overkill" capacity.\textsuperscript{6} As Henry Brands concludes, Eisenhower's administration, "far more than any administration before or after, ... promoted the growth of the military-industrial complex he decried."\textsuperscript{7}

Other historians, such as Robert Divine and Bernard Firestone, reach more positive conclusions. According to them, the Eisenhower administration should be praised because it helped to lay the groundwork for the 1963 Limited Test Ban Treaty.\textsuperscript{8} By curbing radioactive pollution in the atmosphere, under-water and outer-space, the Partial Treaty allayed public anxieties about the negative health effects caused by nuclear testing. However, 


\textsuperscript{6} This "overkill" capacity included not only a huge number of nuclear weapons but also an excessive number of targets for them. In 1961, for example, one SAC list included 2,021 targets in the Soviet Union. See David Allan Rosenberg, "The Origins of Overkill: Nuclear Weapons and American Strategy," in \textit{National Security: Its Theory and Practice, 1945-60}, ed. Norman A. Graebner (New York, 1986), 124, 170.


as physicist Herbert York points out, this accomplishment needs to be qualified since "in the absence of a comprehensive test ban, such hazards as underground contamination, earthquakes and leakage of radioactive substances into the atmosphere remained possible." The agreement had other shortcomings as well. Because the atmospheric ban did not eliminate, or even reduce, nuclear testing, but merely forced it underground, it did little to slow proliferation or the escalating arms race between the superpowers. Indeed, as predicted by the British, the agreement probably contributed to competitive underground testing. Much later, Averell Harriman, one of Kennedy's negotiators, observed that: "When you stop to think of what the advantages were to us of stopping all testing in the early 1960s ... it's really appalling to realize what a missed opportunity we had."10

Negotiators at the Geneva Test Ban Talks in the late 1950s probably shared similar sentiments. In December 1961, Michael Wright, the Scientific Advisor to the U.K. Delegation in Geneva, analysed the reasons for the failure of these negotiations in a Top Secret Report. Even before the conference began, in his view, "the knives were already out in Washington for a fight against the suspension of nuclear testing." Right from the beginning, the Pentagon and the Atomic Energy Commission had fought a "stubborn rearguard action" within the Eisenhower


10 Quoted in Glenn T. Seaborg, Kennedy, Khrushchev and the Test Ban (Berkely, 1981), 242.
administration against an agreement to ban tests. Although those opposing a treaty might have been right in their view that the Soviet government would never accept the type of control system desired by the West, "due to the obstruction and delaying tactics of the American opponents of the treaty, we were never able to demonstrate the truth of the Soviet attitude in negotiations." Wright still hoped that some meaningful accord might be reached under the new Kennedy administration, but he was not optimistic. Although the American obstructions in the Geneva negotiations were the product, in his view, of a "failure in leadership" and a "weak Presidency," Wright feared that they were also "to some extent endemic in the American system and therefore likely to recur."¹¹

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