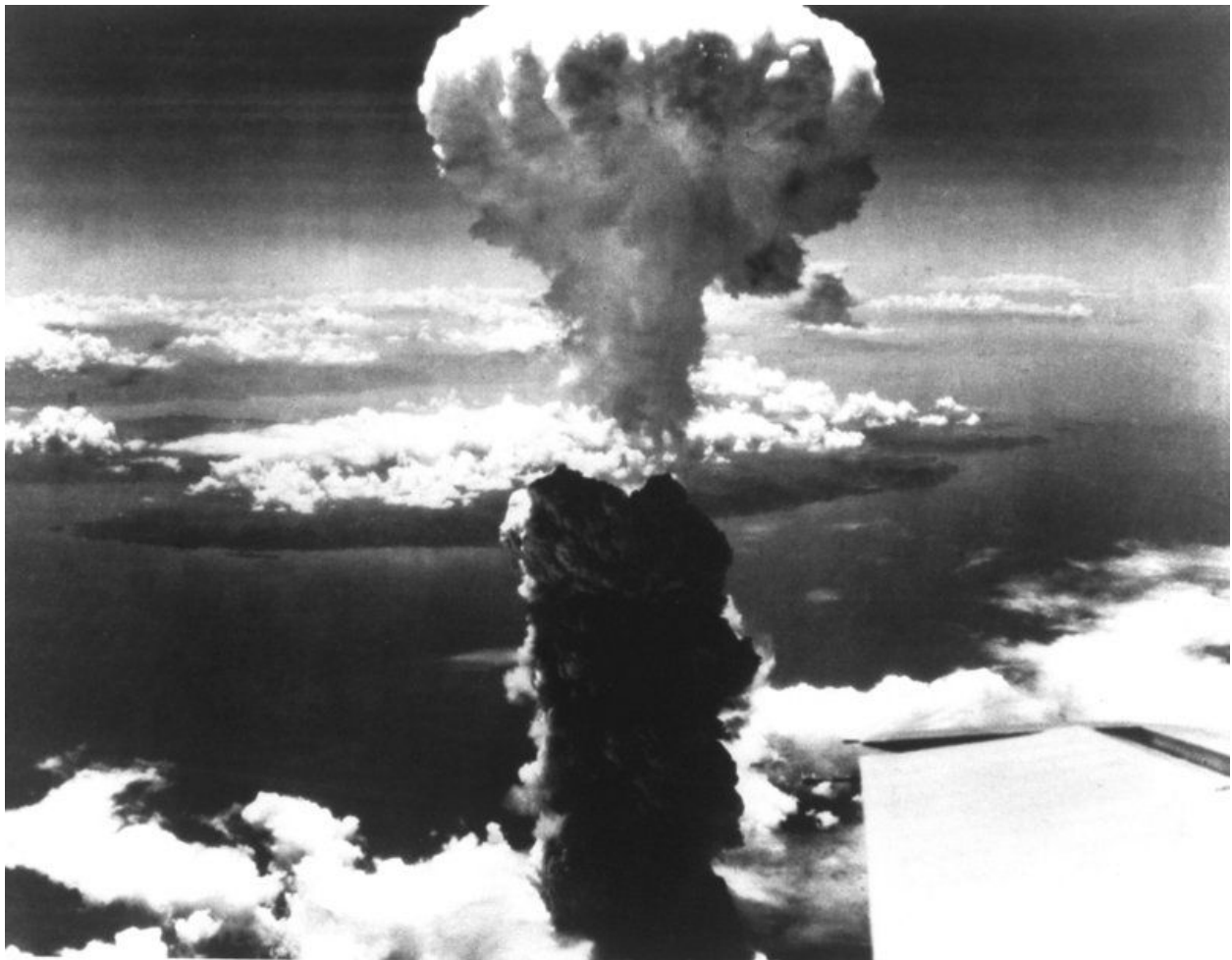


## Source 1

Source Information: Time Magazine Article, What Is the Difference Between a Hydrogen Bomb and an Atomic Bomb?

# What Is the Difference Between a Hydrogen Bomb and an Atomic Bomb?



[A mushroom cloud forms over Nagasaki, Japan after the dropping of the second atomic bomb.](#) [Time Life Pictures—The LIFE Picture Collection/Getty Images](#)

BY **MELISSA CHAN**

SEPTEMBER 22, 2017

North Korea warned this week that it [might test a hydrogen bomb](#) in the Pacific Ocean, after saying the country had already successfully detonated one.

A hydrogen bomb has never been used in battle by any country, but experts say it has the power to wipe out entire cities and kill significantly more people than the already powerful atomic bomb, which the U.S. dropped in Japan during World War II, killing tens of thousands of people.

As global tensions continue to rise over North Korea's nuclear weapons program, here's what to know about atomic and hydrogen bombs:

## **Why is a hydrogen bomb stronger than an atomic bomb?**

More than 200,000 people died in Japan after the U.S. dropped the world's first atomic bomb on Hiroshima and then another one three days later in Nagasaki during World War II in 1945, according to the Associated Press. The bombings in the two cities were so devastating, they forced Japan to surrender.

But a hydrogen bomb has the potential to be 1,000 times more powerful than an atomic bomb, according to several nuclear experts. The U.S. witnessed the magnitude of a hydrogen bomb when it tested one within the country in 1954, the [New York Times](#) reported.

Hydrogen bombs cause a bigger explosion, which means the shock waves, blast, heat and radiation all have larger reach than an atomic bomb, according to

Edward Morse, a professor of nuclear engineering at University of California, Berkeley.

Although no other country has used such a weapon of mass destruction since World War II, experts say it would be even more catastrophic if a hydrogen bomb were to be dropped instead of an atomic one.

“With the [atomic] bomb we dropped in Nagasaki, it killed everybody within a mile radius,” Morse told TIME on Friday, adding that a hydrogen bomb’s reach would be closer to 5 or 10 miles. “In other words, you kill more people,” he said.

Hall, director of the University of Tennessee’s Institute for Nuclear Security, called the hydrogen bomb a “city killer” that would probably annihilate between 100 and 1,000 times more people than an atomic bomb.

“It will basically wipe out any of modern cities,” Hall said. “A regular atomic bomb would still be devastating, but it would not do nearly as much damage as an H-bomb.”



Hiroshima in ruins following the atomic bomb blast. Bernard Hoffman—The LIFE Picture Collection/Getty Images

## **What's the difference between hydrogen bombs and atomic bombs?**

Simply speaking, experts say a hydrogen bomb is the more advanced version of an atomic bomb. “You have to master the A-bomb first,” Hall said.

An atomic bomb uses either uranium or plutonium and relies on fission, a nuclear reaction in which a nucleus or an atom breaks apart into two pieces. To make a hydrogen bomb, one would still need uranium or plutonium as well as two other isotopes of hydrogen, called deuterium and tritium. The hydrogen

bomb relies on fusion, the process of taking two separate atoms and putting them together to form a third atom.

“The way the hydrogen bomb works — it’s really a combination of fission and fusion together,” said Eric Norman, who also teaches nuclear engineering at UC Berkeley.

In both cases, a significant amount of energy is released, which drives the explosion, experts say. However, more energy is released during the fusion process, which causes a bigger blast. “The extra yield is going to give you more bang,” Morse said.

Morse said the atomic bombs dropped on Japan were each equivalent to just about 10,000 kilotons of TNT. “Those were the little guys,” Morse said. “Those were small bombs, and they were bad enough.” Hydrogen bombs, he said, would result in a yield of about 100,000 kilotons of TNT, up to several million kilotons of TNT, which would mean more deaths.

Hydrogen bombs are also harder to produce but lighter in weight, meaning they could travel farther on top of a missile, according to experts.

## **What are the similarities between hydrogen bombs and atomic bombs?**

Both bombs are extremely lethal and have the power to kill people within seconds, as well as hours later due to radiation. Blasts from both bombs would

also instantly burn wood structures to the ground, topple big buildings and render roads unusable.

[LIFE magazine](#) described such devastation in an article published on March 11, 1946, on the aftermath of the atomic bombs dropped on Japan. The piece read: “In the following waves [after the initial blast] people’s bodies were terribly squeezed, then their internal organs ruptured. Then the blast blew the broken bodies at 500 to 1,000 miles per hour through the flaming, rubble-filled air. Practically everybody within a radius of 6,500 feet was killed or seriously injured and all buildings crushed or disemboweled.”

## Using Source 1

<p><b>Sourcing Questions</b> Based on the article, what is the main difference between the Hydrogen and Atomic Bomb?</p> <p>What are the similarities between the Atomic and Hydrogen Bombs?</p> <p>When writing a journalist based article, they should not be biased in their writing, can you see any opinion from the author in this article?</p>	
<p><b>Contextualization Questions</b> The year this article was written was 2017, why do you think that they would be writing about this historical event in the modern day? Are there any modern day events revolving around nuclear bombs that were going on around the same time this article was written?</p>	
<p><b>Corroboration Tasks</b> What themes and/or topics are addressed in both sections of this article?</p> <p>Is it clear to the reader based on the pictures listed in source 1 the destruction that these devices could cause? If so estimate what types of negatives these devices could cause if used in the modern day.</p>	
<p><b>Close Reading Questions</b> What modern day examples does this article give of the use of the hydrogen or atomic bombs?</p> <p>How much “damage” can the hydrogen bomb inflict compared to the atom bomb?</p> <p>If we already had the atom bomb can you think of any reasons why we would need to create a bigger and more powerful bomb?</p>	

## Source 2

Source Information: Truman Library, Truman Press Release- Atomic Bomb, August 6, 1945.

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# Atomic Bomb-Truman Press Release-August 6, 1945



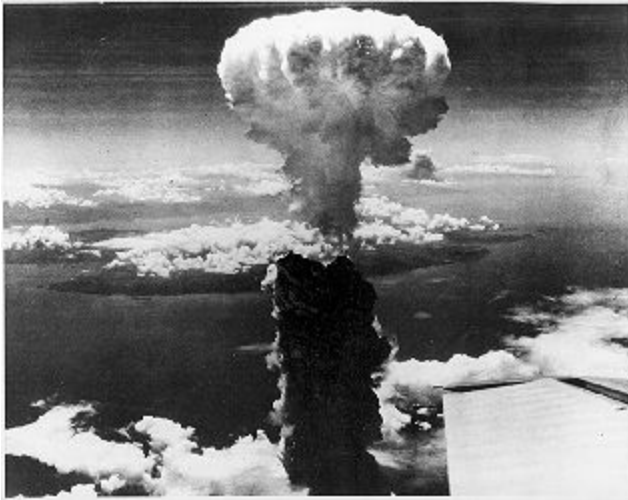
## Introduction

In the early morning hours of July 16, 1945, great anticipation and fear ran rampant at White Sands Missile Range near Alamogordo, New Mexico. Robert Oppenheimer, director of the Manhattan Project, could hardly breathe. Years of secrecy, research, and tests were riding on this moment. "For the last few seconds, he stared directly ahead and when the announcer shouted Now!" and there came this tremendous burst of light followed abruptly there after by the deep growling of the explosion, his face relaxed into an expression of tremendous relief," recalled General L. R. Groves of Oppenheimer, in a memorandum for Secretary of War George Marshall. The explosion carrying more power than 20,000 tons of TNT and visible for more than 200 miles succeeded. The world's first atomic bomb had been detonated.

With the advent of the nuclear age, new dilemmas in the art of warfare arose. The war in Europe had concluded in May. The Pacific war would receive full attention from the United States War Department. As late as May 1945, the U.S. was engaged in heavy fighting with the Japanese at Iwo Jima and Okinawa. In these most bloody conflicts, the United States had sustained more than 75,000 casualties. These victories insured the United States was within air striking distance of the Japanese mainland. The bombing of Pearl Harbor by the Japanese to initiate United States entrance into the war, just four years before, was still fresh on the minds of many Americans. A feeling of vindication and a desire to end the war strengthened the resolve of the United States to quickly and decisively conclude it. President Harry Truman had many alternatives at his disposal for ending the war: invade the Japanese mainland, hold a demonstration of the destructive power of the atomic bomb for Japanese dignitaries, drop an atomic bomb on selected industrial Japanese cities, bomb and blockade the islands, wait for Soviet entry into the war on August 15, or mediate a compromised peace. Operation Olympia, a full scale landing of United States armed forces, was already planned for Kyushu on November 1, 1945 and a bomb and blockade plan had already been instituted over the Japanese mainland for several months.



The Japanese resolve to fight had been seriously hampered in the preceding months. Their losses at Iwo Jima and Okinawa had been staggering. Their navy had ceased to exist as an effective fighting force and the air corps had been decimated. American B-29's made bombing runs over military targets on the Japanese mainland an integral part of their air campaign. Japan's lack of air power hindered their ability to fight. The imprecision of bombing and the use of devastating city bombing in Europe eventually swayed United States Pacific theater military leaders to authorize bombing of Japanese mainland cities. Tokyo, Nagoya, Osaka, and Kobe all were decimated by incendiary and other bombs. In all, hundreds of thousands of civilians were killed in these air strikes meant to deter the resolve of the Japanese people. Yet, Japanese resolve stayed strong and the idea of a bloody "house to house" invasion of the Japanese mainland would produce thousands more American and Allied casualties. The Allies in late July 1945 declared at Potsdam that the Japanese must unconditionally surrender.



After Japanese leaders flatly rejected the Potsdam Declaration, President Truman authorized use of the atomic bomb anytime after August 3, 1945. On the clear morning of August 6, the first atomic bomb, nicknamed Little Boy, was dropped on the city of Hiroshima. Leveling over 60 percent of the city, 70,000 residents died instantaneously in a searing flash of heat. Three days later, on August 9, a second bomb, Fat Man, was dropped on Nagasaki. Over 20,000 people died instantly. In the successive weeks, thousands more Japanese died from the after effects of the radiation exposure of the blast.

## **Vocabulary**

### *incendiary bomb*

The incendiary bomb was a mixture of thermite and oxidizing agents employed by the Allies and Axis powers after 1943. Sometimes incorporating napalm, these bombs were responsible for burning over 41.5 square miles of Tokyo by the United States in March 1945.

### *unconditional surrender*

Unconditional surrender is a term used by victors in war to describe the type of settlement they wish to extoll from the vanquished. The settlement demands that the loser make no demands during surrender proceedings. Unconditional surrender was first enunciated by the Allies during World War II at a summit meeting at Casablanca in January 1943.

### *providence*

divine guidance or care

*ultimatum*

the final propositions, conditions, or terms offered by either of the parties during a diplomatic negotiation

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**Source**

Read the [press release](#) from President Truman on August 6, 1945 following the dropping of the atomic bomb noting important details about its production and the rhetoric used.

## Using Source 2

<p><b>Sourcing Questions</b></p> <ul style="list-style-type: none"><li>• Who wrote this document?</li><li>• What is the purpose of this document?</li><li>• What date was this document issued?</li></ul>	
<p><b>Contextualization Questions</b></p> <ul style="list-style-type: none"><li>• Why does the atomic bomb's power have to be explained?</li><li>• Look at the last paragraph of the second page of the press release. What were Truman's plans for ending the war? Did he accomplish those goals in dropping the atomic bomb on Hiroshima and Nagasaki? Why or why not?</li></ul>	
<p><b>Corroboration Tasks</b></p> <ul style="list-style-type: none"><li>• On page three, Truman advocates the use of atomic power for world peace. How does he propose to fulfill this goal?</li><li>• What reasons does President Truman use to justify dropping the bomb?</li></ul>	
<p><b>Close Reading Questions</b></p> <ul style="list-style-type: none"><li>• Armed with all of the knowledge that President Truman and his advisors had accumulated, how would you have ended the war in the Pacific?</li></ul>	

### Source 3

Source Information: Atomic Heritage Foundation, Debate over the Japanese Surrender. June 1st, 2016. Speech: \_Recordings, Historical. "[RARE] The Voice of Hirohito - 1945 Jewel Voice Broadcast (玉音放送)." YouTube. 09 Mar. 2019. YouTube. 07 June 2019 &lt;<https://www.youtube.com/watch?v=FnMk1Vhg1oM&gt>

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<https://www.atomicheritage.org/history/debate-over-japanese-surrender>

# Debate over the Japanese Surrender

History Page Type: [Bombings of Hiroshima and Nagasaki](#)

Profiles: [Harry Truman](#)[Emperor Hirohito](#)[Henry Stimson](#)[Alex Wellerstein](#)[J. Samuel Walker](#)

Date: Wednesday, June 1, 2016

Resources: [The Jewel Voice Broadcast](#)



The debate over what precipitated the Japanese surrender at the end of World War II is a source of contention among historians. This debate has also figured prominently in the discussion of the atomic bombings of Hiroshima and Nagasaki (for more on that discussion, see [Debate over the Bomb](#)). The “traditional narrative” put forward in the war’s immediate aftermath was that using the atomic bombs caused the surrender, but this narrative has come under fire in subsequent years.

As with other debates around the Manhattan Project, ambiguities arise due to the fact that many of the available primary sources are considered unreliable. The historians who have tackled this issue have generally used the same pool of primary source information, but they have come to divergent conclusions because they differed in which sources they considered trustworthy or significant.

## Traditionalist School

The “traditionalist school” accepts the explanation given by [President Truman](#), Secretary of War [Henry L. Stimson](#), and others in the government in the aftermath of the war. The traditionalist conception is that the atomic bombs were crucial to forcing Japan to accept surrender, and that the bombings prevented a planned invasion of Japan that might have cost more lives. [Emperor Hirohito](#)’s citation of the “new and most cruel bomb” in his [speech announcing surrender](#) bolsters this theory’s credibility.

Historians have critiqued various parts of this rationale for the bombings, including casualty estimates from the planned invasion. Retrospective estimates vary wildly, and are often lower than the figures stated by Truman and Stimson. But there is also a sizable literature disagreeing with the central premise: that the bombs led to the surrender.

## Revisionist School



The oldest and most prominent critics of the traditionalist school have been the “revisionist school,” starting with Gar Alperovitz in the 1960s. The revisionists argue that Japan was already ready to surrender before the atomic bombs. They say the decision to use the bombs anyway indicates ulterior motives on the part of the US government. Japan was attempting to use the Soviet Union to mediate a negotiated peace in 1945 (a doomed effort,

since the Soviets were already planning on breaking off their non-aggression pact and invading). Revisionists argue that this shows the bombings were unnecessary.

The other piece of evidence behind this claim is the US Strategic Bombing Survey, conducted after the war. It concluded that Japan would have surrendered anyway before November (the planned start date for the full-scale invasion). Some historians have identified flaws in the survey, based on contemporary evidence. Others have argued that

the US had no reason to trust the sincerity of the Japanese outreach to the Soviets, and that evidence from within Japan indicates that the Japanese Cabinet was not fully committed to the idea of a negotiated peace.

Revisionists have also contended that surrender could have happened without the bombings if the US had compromised on its goal of unconditional surrender. The sticking point for the Japanese was retaining the emperor in his position. It is unclear if they would have accepted the reduction of the emperor to a figurehead, as eventually happened after the war. Many officials advocated for maintaining the emperor's authority as a condition for surrender even after the Hiroshima bombing.

## Emperor Hirohito's Speech **Start 3:10-**[The Voice of Hirohito](#)

### Using Source 3

<p><b>Sourcing Questions</b> Based on the source what are some reasons for defending both sides of this argument?</p> <p>In looking at the speech what type of tone does this provide the listener?</p> <p>In reading the article do you feel that the author takes a stance on which side of the argument they fall on?</p>	
<p><b>Contextualization Questions</b> What side of the argument do you think most americans were on in 1945?</p> <p>What evidence does the article and speech provide that the Japanese were close to surrendering?</p> <p>What evidence does the article and speech provide that the Japanese weren't close to surrendering?</p>	
<p><b>Corroboration Tasks</b> Based on the article and the speech, in listening to the speech which side of the argument do you think that it would side under?</p> <p>What military topics are cited in both sides of the argument, through the article and the speech?</p>	
<p><b>Close Reading Questions</b> If you were picking a side in this argument which side would you find yourself on, and why?</p> <p>Based on the end result of what happened in WWII what side did President Truman and the White House side with? How do we know?</p> <p>What evidence from the speech can you cite as the main reason for Japan's surrender?</p>	

## Source 4

Source Information: Truman Library, Harry S. Truman Public Papers, January 31st, 1950.

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<https://www.trumanlibrary.org/publicpapers/index.php?pid=642&st=hydrogen&st1>

# Public Papers

## Harry S. Truman

### 1945-1953

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#### 26. Statement by the President on the **Hydrogen Bomb**

January 31, 1950

IT IS part of my responsibility as Commander in Chief of the Armed Forces to see to it that our country is able to defend itself against any possible aggressor. Accordingly, I have directed the Atomic Energy Commission to continue its work on all forms of atomic weapons, including the so-called **hydrogen** or superbomb. Like all other work in the field of atomic weapons, it is being and will be carried forward on a basis consistent with the overall objectives of our program for peace and security.

This we shall continue to do until a satisfactory plan for international control of atomic energy is achieved. We shall also continue to examine all those factors that affect our program



## Using Source 4

<p><b>Sourcing Questions</b> Based on the fact that this is a press release to the public, how might that influence its tone and purpose?</p> <p>In looking at this source what is President Truman trying to convey to the public?</p> <p>Based on the header of this press release, what significance does this hold to the American people?</p>	
<p><b>Contextualization Questions</b> This press release is dated January 31st 1950, based on this date can we think of any events that were happening in the world during this time?</p> <p>This letter states that the United States must defend itself, what do you think that Truman is referring to in this statement?</p>	
<p><b>Corroboration Tasks</b> What is the general theme of this specific press release?</p> <p>What actions does this presidential press release call for?</p> <p>What information have we looked at previously that would help the reader understand the context of the press release?</p>	
<p><b>Close Reading Questions</b> Who gave this press release first hand to the public?</p> <p>What is the point of a presidential press release in general?</p>	

## Source 5

Source Information: Truman Library, Department Of The Air Force, Memorandum To Secretary Johnson, 1949.

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<del>SECRET</del>	DECLASSIFIED E.O. 13526, 13527, 13528 DATE 10/20/2011 BY NLT/...
DEPARTMENT OF THE AIR FORCE WASHINGTON	
OFFICE OF THE SECRETARY	1949
MEMORANDUM TO SECRETARY JOHNSON	

The extremely limited tactical air power available to the Western democracies and the absolute need for adequate aviation of this type if we are to have any hope of resisting possible Soviet aggression, against Western Europe, serve to emphasize our requirements in this field. The proposed increase of 10 groups, eight of them fighters which can be used for both air defense and tactical air functions, would serve to alleviate the serious conditions existing in this essential category.

The development by the Russians of the atomic bomb, and our knowledge that they already have the equipment to deliver that type and all other type bombs, increases the importance of these fighter groups.

If the Soviet Union should decide upon war, we must assume that they would adopt the most effective plan for conducting it. Their political objective would be the expansion of Soviet power to the whole of Eurasia, principally Western Europe and the United Kingdom. Their best strategic plan, however, would be an immediate atomic attack upon the United States.

Only the power of the United States is preserving the integrity of Western Europe. If the military power of the United States were destroyed or seriously damaged, Western Europe would fall almost without a struggle.

If the Soviet Union were able to drop any considerable number of atomic bombs upon key American targets, substantial damage to American military power would have taken place.

In conclusion, it seems to us that at least two requirements have been brought into sharper focus by the recent atomic explosion in Russia. First, we must provide now the defenses to permit us to survive an ini atomic attack. Second, we must have now the means of carrying the atta back to the enemy. Our actions to meet these requirements must be base on sound and calm judgments -- but let us not mistake inaction for calmness.



*W. Stuart Singleton*

W. STUART SINGLETON  
Secretary of the Air Force

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## Using Source 5

<p><b>Sourcing Questions</b> Looking that the year of this memorandum is 1949 what events were transpiring during this time period?</p> <p>What events were occurring in foriegn affairs during this time period?</p> <p>Based on the fact that this document is listed as classified for this time period, what inferences can we make regarding this classification about the information.</p>	
<p><b>Contextualization Questions</b> What themes and topics are discussed in this memorandum?</p> <p>What is the overall message of this memorandum and who is its audience during this time period?</p>	
<p><b>Corroboration Tasks</b> Is it clear, based on previous discussed sources what the theme of this memorandum is the basis for?</p> <p>What additional information does this source give us about the military climate of this specific time period in the United States?</p>	
<p><b>Close Reading Questions</b> Who was the author of this memorandum?</p> <p>When looking at this source is it critical or complimentary of the events that they are discussing?</p> <p>Why is this memorandum addressed to Secretary Johnson specifically and what is his significance?</p>	

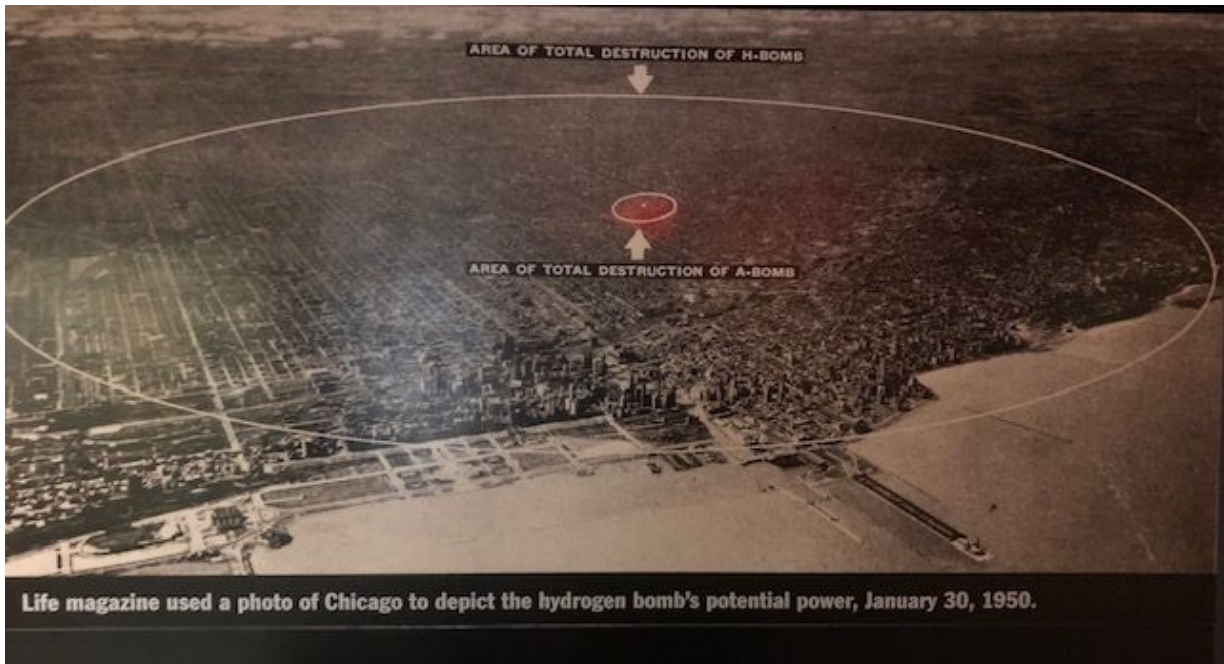
## Source 6

Source Information: Life Magazine October 31st 1952 "The United States tested the world's first hydrogen on the Pacific Island of Eniwetok". Life Magazine January 30th, 1950. "Atom Bomb destruction compared to the Hydrogen Bomb using the city of Chicago". McMillan, Priscilla Johnson. *The Ruin of J. Robert Oppenheimer, and the Birth of the Modern Arms Race*. Viking, 2005.

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Life Magazine October 31st 1952 "The United States tested the world's first hydrogen on the Pacific Island of Eniwetok"



Life Magazine January 30th, 1950. "Atom Bomb destruction compared to the Hydrogen Bomb using the city of Chicago".

A day or two after the announcement of Fuchs's confession, a dozen physicists signed an appeal in the *Wall Street Journal*, describing use of the H-bomb as "a betrayal of all standards of morality and of Christian civilization itself," and calling for a pledge by the U.S. government not to be the first to use it. And a few days after that, three famed theoreticians spoke their minds on Mrs. Franklin Roosevelt's weekly television program. Characterizing the arms race as "inexorable," Albert Einstein called "each step . . . the inevitable consequence of the one before. And, at the end . . . lies general annihilation." Hans Bethe emphasized the H-bomb's genocidal nature. The only reason for developing it, he said, lay in the danger that the Russians might build it first and use it to blackmail the United States. By announcing that we would never be first to use it, we could reduce the odds that they would use it to forestall a strike by us. And Oppenheimer emphasized the "grave danger for us in that these decisions

McMillan, Priscilla Johnson. *The Ruin of J. Robert Oppenheimer, and the Birth of the Modern Arms Race*. Viking, 2005.

## Using Source 6

<p><b>Sourcing Questions</b></p> <p>In looking at the first picture and recognizing the date what events had transpired right before this date in history?</p> <p>Being that the first two sources are pictures what inferences can you make about the Hydrogen Bomb?</p> <p>Looking at the third source why can we assume really influential people were cautious about the Hydrogen Bomb?</p>	
<p><b>Contextualization Questions</b></p> <p>In looking at the dates of the first two pictures what worldwide event can you infer that the United States was preparing for?</p> <p>In looking at the reading excerpt, would you be able to infer whether or not the writer was in support of the Hydrogen Bomb?</p>	
<p><b>Corroboration Tasks</b></p> <p>What themes are overall brought to the attention of the American People through these three sources?</p> <p>What additional information does the text excerpt bring to the table in why lead scientist may not be in full support of this weapons program?</p>	
<p><b>Close Reading Questions</b></p> <p>Why do you think in the first photograph the United States chose to drop the bomb on the specific islands listed in the description?</p> <p>Why specifically was Albert Einstein in disfavor of the development of the Hydrogen Bomb?</p>	

## Source 7

Source Information: "Father of the Atomic Bomb Was Blacklisted for Opposing H-Bomb" Becky Little, History.com. July 16th 2018.

<https://www.history.com/news/father-of-the-atomic-bomb-was-blacklisted-for-opposing-h-bomb>

# "Father of the Atomic Bomb" Was Blacklisted for Opposing H-Bomb

After creating the first one, J. Robert Oppenheimer called for international controls on nuclear weapons.

BECKY LITTLE

On July 16, 1945, a team of scientists and engineers watched [the first successful atomic bomb explosion](#) at the [Trinity test site](#) in Alamogordo, New Mexico. The team, dubbed "[The Manhattan Project](#)," had been secretly developing the weapon at the Los Alamos Laboratory during World War II. By the time it was ready, the Allies had already declared [victory in Europe](#), but were still fighting in Japan.

Physicist [J. Robert Oppenheimer](#), the director of the laboratory and so-called "father of the atomic bomb," watched from afar that morning as the bomb released a mushroom cloud 40,000 feet high. His description of that moment has since become famous:

"I remembered the line from the Hindu scripture the *Bhagavad-Gita*," [he said](#). "Now I am become Death, the destroyer of worlds.' I suppose we all



thought that, one way or another.”

On August 6, the U.S. dropped the bomb on [Hiroshima, Japan](#), wiping out 90 percent of the city and killing 80,000 people. Three days later, the U.S. killed 40,000 people in Nagasaki with another bomb. Tens of thousands more would die from radiation exposure. Japan surrendered a few days after the second bombing, ending World War II.

As details of the horrific destruction reached the Manhattan Project scientists, many began to question what they had done. In late October, Oppenheimer visited President Harry S. Truman, who had okayed the use of both bombs, to talk to him about placing international controls on nuclear weapons. Truman, worried about the prospect of the Soviet nuclear development, dismissed him.



The mushroom cloud produced by the first explosion by the Americans of a hydrogen

bomb at Eniwetok Atoll in the South Pacific. Known as Operation Ivy, this test represented a major step forwards in terms of the destructive power achievable with atomic weapons. (Credit: SSPL/Getty Images)

When Oppenheimer said he felt compelled to act because he had blood on his hands, Truman angrily told the scientist that “the blood is on my hands, let me worry about that.” He then kicked him out of the Oval Office, [writes author Paul Ham](#) in [\*Hiroshima Nagasaki: The Real Story of the Atomic Bombings and Their Aftermath\*](#).

Ham isn't convinced that Oppenheimer felt remorse specifically for the bombing of Japan, which the scientist may have viewed as a necessary evil. Rather, he thinks that Oppenheimer was more concerned about the devastation that future nuclear war could bring.

After the war, Oppenheimer took steps to prevent such a future. He began working with the U.S. Atomic Energy Commission to control the use of nuclear weapons. In 1949, when Truman approached the commission about creating a hydrogen bomb, Oppenheimer opposed it.

Despite his opposition, the U.S. developed an H-bomb and [tested it in 1952](#). But Oppenheimer's resistance ended up costing him his job. During the [McCarthy era](#), the government stripped him of his job with the commission, citing his opposition to the hydrogen bomb as well as his purported Communist ties.

Oppenheimer's blacklisting had more to do with his stance on the H-bomb than his Communist friends. Still, it created a scandal that followed him until

his death in 1967. For decades afterwards, people continued to speculate about whether he was a Soviet spy.

Today, Oppenheimer is mostly remembered as a scientist who was persecuted for trying to address the moral problems of his creation. Though there have been some close calls, no country has used nuclear bombs as weapons since Hiroshima and Nagasaki. Which means that so far, we've been able to avoid the nuclear future Oppenheimer feared he'd already set in motion.

### Using Source 7

<p><b>Sourcing Questions</b> Based on the fact that this is a public article what is the overall tone of the topic provided?</p> <p>In reading the article do you feel that the author has any bias in the information provided, why or why not?</p> <p>Can you make any inferences to why the father of the bomb would be opposed to furthering nuclear weaponry?</p>	
<p><b>Contextualization Questions</b> What events based on the article and what we have already looked at lead to this opposition?</p> <p>In looking at the articles title why is this scientist referred to as the “father of the bomb”?</p>	
<p><b>Corroboration Tasks</b> What is the overall method and topic of this article?</p> <p>What additional information does this article provide us with regarding the development of the Hydrogen Bomb?</p>	
<p><b>Close Reading Questions</b> Give quotes to why the lead scientist named in the article is opposed to the Hydrogen Bomb.</p> <p>Why was Oppenheimer blacklisted for his opinion regarding the development of the H-Bomb?</p>	

### Source 8

Source Information: Board, The Editorial. "Korea Heads for Denuclearization: Political Cartoons." *Orange County Register*, Orange County Register, 3 May 2018, [www.ocregister.com/2018/05/02/korea-heads-for-denuclearization-political-cartoons/](http://www.ocregister.com/2018/05/02/korea-heads-for-denuclearization-political-cartoons/).

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### Using Source 8

<b>Sourcing Questions</b> What type of source is this?	
<b>Contextualization Questions</b> What does DMZ refer to?	
<b>Corroboration Tasks</b> What opinion about denuclearization does the cartoonist portray in this source?	
<b>Close Reading Questions</b> The two men in the cartoon are named Kim and Moon. Who are these men and what countries do they represent?	

## Source 9

Source Information: "The Storied Past of 'Denuclearization'." *Wilson Center*, 12 Oct. 2018, [www.wilsoncenter.org/blog-post/the-storied-past-denuclearization](http://www.wilsoncenter.org/blog-post/the-storied-past-denuclearization).

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# The Storied Past of 'Denuclearization'

September 20, 2018 By [Ryan Alexander Musto](#)



**The word is not unique to the Korean Peninsula, but could achieve new significance because of it.**

Since taking office, the Trump Administration has demanded the “denuclearization” of the Korean Peninsula. President Donald Trump raised the stakes when he met with North Korean leader Kim Jong-un at a summit in Singapore in June 2018. Their joint [declaration](#) promised that North Korea would commit itself “to work toward complete denuclearization” of the region. An inter-Korean summit held in mid September [reinforced](#) the call to action.

But where did the word “denuclearization” come from, and is it unique to the dangerous situation currently found on the Korean Peninsula?

In a front-page [op-ed](#) in *The New York Times* entitled, “The Word That Could Help the World Avoid Nuclear War,” Jeffrey Lewis, the director of the East Asia nonproliferation

program at the Middlebury Center of International Studies at Monterey, writes that the term “is more or less native to the Korean Peninsula” and “a relic from the 1990s.”

Yet a deeper dive into the history of the word “denuclearization” reveals a longer and more varied backstory. It also reveals that the denuclearization of the Korean Peninsula would bestow new significance upon the term.

The word “denuclearization” first emerged in the late 1950s in reference to Central Europe. It derived from the term “demilitarization,” which had most recently been used in a 1955 British arms control proposal for Central Europe as a means of reunifying Germany and aligning it with the North Atlantic Treaty Organization (NATO). Both East and West rejected that plan, but the idea of arms limitations in Central Europe endured.

In October 1957, Poland’s Foreign Minister Adam Rapacki proposed at the United Nations General Assembly the prohibition of nuclear weapons in East Germany, West Germany, Poland, and Czechoslovakia. Rapacki issued his proposal in response to the presence of U.S. tactical nuclear weapons in West Germany and potential plans to share nuclear weapons amongst NATO allies. Although Rapacki did not initially use the term “denuclearization” in the presentation of his scheme, within a few months the word became associated with the so-called “Rapacki Plan.”

The word itself did not have any special connotation in relation to the Rapacki Plan. Pundits used the term “denuclearization” synonymously with “atom-free zone,” “nuclear-free zone,” “nuclear disengagement,” “de-atomization,” and “limited disarmament,” amongst other phrases, to describe the contours of the Polish proposal. While some Western officials sympathetic to the Polish effort secretly encouraged Rapacki to abandon the term “disengagement” given its negative connotations in the West, both sides of the Cold War used the word “denuclearization” freely.

In one example, Nikolai Patolichev, a Soviet First Deputy Foreign Minister, used it in early 1958 as he dismissed a rumor that Moscow had established rocket-launching bases in Czechoslovakia, East Germany, and Poland: “It’s a lie. It doesn’t make sense for us to support the Rapacki plan for the denuclearization of Central Europe and build rocket bases at the same time,” he said. In another example, Canadian Undersecretary of State Jules Léger wrote in a secret cable of his worries that if the West rejected the Rapacki Plan outright, “neither the U.S. nor the U.S.S.R. will ever be able to agree to the denuclearization of any region in which nuclear weapons have already been placed.”



The West rejected the Rapacki Plan in 1958, but the issue of denuclearization in Europe persisted. It again rose to prominence in the early 1980s during the so-called Euromissiles Crisis, when proposals for the deployment of new generations of nuclear weapons in Europe sparked global protest. For example, George F. Kennan, the so-called father of the U.S. containment doctrine, penned an op-ed in *The New York Times* urging both sides of the Cold War to prohibit nuclear weapons from Central and Northern Europe. As a point of emphasis, Kennan simply entitled his article “Denuclearization.”

The term, though, was hardly confined to the European theater during the Cold War. In November 1961, the United Nations passed a [resolution](#) that called on its members to “consider and respect the continent of Africa as a denuclearized zone” in the wake of French nuclear testing in the Sahara Desert. The occasion seemingly marked the first time that the word formally entered into the international legal lexicon, as it was never used when twelve nations made [Antarctica](#) the world’s first denuclearized zone in 1959. However, given that key nuclear nations like Great Britain, France, and the United States abstained from voting on the African initiative, the gesture had limited significance.

A more notable achievement occurred later in the decade, when Latin America became the first denuclearized zone in an inhabited region. The negotiations took place amongst 21 nations under the auspices of the Preparatory Commission for the Denuclearization of Latin America. The nations gathered had planned to call the final agreement the “Treaty for the Denuclearization of Latin America,” but in February 1967, only two weeks before the Treaty opened for signature, Brazil suggested that the title be changed.

Brazil had been the first to use the word for Latin America in the fall of 1962, initially as a proposed extension of the African effort and then as a solution to the Cuban Missile Crisis. With the missiles removed from Cuba, Brazil claimed by 1967 that the term was outdated for the region. Moreover, Brazil believed that the term “offered some ambiguities” and failed to account for the desire of Latin American peoples to use nuclear energy for peaceful purposes. This observation had controversial undertones, as Brazil (and some others) fought to have the right to “peaceful nuclear explosions” (PNEs) under the Treaty, which would allow the use of nuclear explosive devices (all but indistinguishable from nuclear weapons) for large-scale civil engineering projects. In the end, the title was changed to the “Treaty for the Prohibition of Nuclear Weapons in Latin America,” and the right to PNEs remained disputed.

Even within Asia, the term is not unique to the Korean Peninsula. As early as January 1958, Japanese socialist politicians called for an “Asian denuclearized zone” in the mold of the pending Rapacki Plan. U.S. officials worried that the proposal might include such key U.S. allies as Japan, Taiwan, and South Korea. Nor did the term suddenly appear in the early 1990s specifically for the Korean Peninsula. For example, in September 1986 North Korea [hosted](#) delegates from more than eighty nations at the “Pyongyang International Conference for Denuclearization and Peace on the Korean Peninsula” as a ruse for its own nuclear aspirations.

Nevertheless, the use of the word for the Korean Peninsula has specific meanings. Lewis makes the important point that experts have intentionally used the term “denuclearization” over “disarmament” in order to capture the complexity of the situation on the Korean Peninsula, which includes the legacy of U.S. nuclear weapons in the region and the “nuclear umbrella” of extended deterrence the United States provides South Korea. Meanwhile, North Korea adheres to a unique [interpretation](#) of “denuclearization,” one that aspires to the “opacity” of Israel – possess nuclear weapons, but do not flaunt them.

Should the key parties prohibit nuclear weapons on the Korean Peninsula, the word “denuclearization” would achieve new significance. No regional denuclearization agreement has ever removed an indigenous nuclear weapons capability. The Treaty of Pelindaba, which formally denuclearized Africa in 2009, opened for signature in 1996, three years after South Africa became the only nation ever to renounce its nuclear weapons.

Likewise, the denuclearization of the Korean Peninsula would be unprecedented for the United States. The U.S. has never led the creation of a denuclearized zone in an inhabited region (it did, more or less, for the uninhabited regions of Antarctica, outer space, and the seabed). Following the dissolution of the Soviet Union in the early 1990s, the United States helped to lead the removal of Russian nuclear weapons from former Soviet satellite states like Belarus, Kazakhstan, and Ukraine, but these arrangements did not establish regional denuclearized zones. Neither did the 1990 Treaty on the Final Settlement with Respect to Germany, despite its prohibition of nuclear weapons from Berlin and the territory that had comprised East Germany.

Before Trump, the United States had also never called for a summit for the purposes of regional denuclearization. In 1958, the United States rejected Soviet calls for a summit in part because the Rapacki Plan appeared to be “the only idea seemingly approaching

negotiability.” In this sense, Trump’s approach is already groundbreaking.

As many experts have pointed out, the denuclearization of the Korean Peninsula remains unlikely. Nuclear weapons provide North Korea with security and prestige, while the United States could be reluctant to undermine the protection it provides South Korea. North Korea’s demand for linking regional denuclearization with a formal agreement to end the Korean War further complicates the situation. If both sides can somehow agree to “ban the bomb” from the Korean Peninsula, though, it would undoubtedly help to make the world a safer place.

Less noticeably, it would also bestow new significance upon the word “denuclearization” beyond a storied past.

### Using Source 9

<p><b>Sourcing Questions</b> What type of source is this?</p> <p>Is this a primary or secondary source?</p>	
<p><b>Contextualization Questions</b> Describe different times in history when denuclearization or disarmament have been considered?</p>	
<p><b>Corroboration Tasks</b> What theme do you see throughout the different times in history when denuclearization has been considered?</p>	
<p><b>Close Reading Questions</b> Does there appear to be any kind of bias in this source?</p>	

## Source 10

Source Information: Jackson, David. "President Trump, Kim Jong Un Seek Something Basic: A Definition of Denuclearization." *USA Today*, Gannett Satellite Information Network, 27 Feb. 2019,

[www.usatoday.com/story/news/politics/2019/02/27/donald-trump-kim-jong-un-denuclearization/2936493002/](http://www.usatoday.com/story/news/politics/2019/02/27/donald-trump-kim-jong-un-denuclearization/2936493002/).

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# President Trump, Kim Jong Un seek something basic: A definition of denuclearization

[David Jackson](#), USA TODAY Published 12:00 a.m. ET Feb. 27, 2019

WASHINGTON – When President Donald Trump and Kim Jong Un [sit down Wednesday in Vietnam](#), one of their goals will be rather basic: defining the very topic of their negotiations, denuclearization.

The United States basically defines the term as having [North Korea eliminate all of its nuclear weapons programs](#). North Koreans see it as removal of all nuclear assets from the region – including those the United States put there to protect South Korea and other allies.

Bridging this definition gap is key to [this week's second summit](#) between Trump and Kim in Hanoi.

"A shared understanding is what denuclearization is," is how one administration official put it.

Two senior administration officials discussed next week's emerging schedule on condition they not be named, citing the confidential nature of negotiations that are

already going on in Vietnam.

Few details were provided about the agenda on Wednesday and Thursday. But they did confirm that Trump and Kim intend to meet alone without aides, just as they did during their first summit last year in Singapore.

Trump and aides want the North Koreans to commit to detailed, concrete ways to eliminate their nuclear weapons programs. But Kim and his government want the U.S. to do something first: ease economic sanctions that are crippling their country.

Addressing this standoff is part of the effort to define denuclearization, officials said.

Trump has downplayed expectations, saying last week that he was in no "rush" to demand denuclearization and insisting he remained confident Kim eventually would do so.

"I don't think this will be the last meeting by any chance, but I do think that the relationship is very strong," Trump told reporters.



Kristine Lee, research associate with the Asia-Pacific Security Program at the Center for a New American Security, said the definition of denuclearization has been "a

sticking point" because of U.S. assets in the region.

"Denuclearization for North Korea has long meant the removal of all of these assets (missile defense systems, stealth fighters) from the peninsula," she said. "Whereas for the United States, this refers exclusively to the elimination of North Korea's nuclear program."

As he prepared to head to Vietnam, Trump got plenty of advice.

A group of more than 40 retired military generals and diplomats urged Trump to consider some kind of sanctions relief. They also backed a proposal to have the United States and North Korea set up liaison offices in each other's cities – not embassies, but offices that can be used to transmit government-to-government messages.

Trump "must move beyond symbolism if he hopes to make real headway towards ending the danger of the North Korean nuclear program," read the letter released by the American Collage of National Security Leaders.

A group of House Democrats, meanwhile, have asked Trump for more details about the North Korea talks.

In a letter to the president, three chairmen of national security committees said Trump's positive statements about Kim are at odds with intelligence assessments that North Korea remains a threat and is likely to want to keep its nuclear weapons.

The letter was signed by chairmen Eliot Engel, D-N.Y., of the House Committee on Foreign Affairs; Adam Smith, D-Wash., Committee on Armed Services; and Adam Schiff, D-Calif., Permanent Select Committee on Intelligence.

"There are ample reasons to be skeptical that Chairman Kim is committed to a nuclear-free North Korea," they said.





Using Source 10

<p><b>Sourcing Questions</b> What type of source is this?</p> <p>Is this a primary or secondary source?</p>	
<p><b>Contextualization Questions</b> In what region of the World is denuclearization being addressed in this source?</p>	
<p><b>Corroboration Tasks</b> Describe some of the advice Trump received in preparation for these negotiations.</p>	
<p><b>Close Reading Questions</b> How does the U.S. define denuclearization?</p> <p>How does North Korea define denuclearization?</p>	

## Source 11

Source Information: Top Secret U.S. Atomic Energy Commission Memorandum for the President by Col. K.E. Fields Document No. LXI-1746-LA, January, 16, 1952

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SECURITY INFORMATION

materials-wise, would not be felt until most of the other rearmament programs had been completed. Indeed, continued Secretary Lovett, he had been greatly surprised and relieved that the impact was not worse than it actually was, and he pointed out his conviction that the Joint Chiefs of Staff had tried to exert all possible restraint in the formulation of their requirements.

Secretary Lovett said that General Vandenberg was better qualified to explain the problems and responsibilities with which, as Chief of Staff of the Air Force, he was now charged. These included the air defense of the United States, strategic operations of the NATO forces, and also a very large-scale tactical air operation requiring perhaps nine thousand conventional aircraft. Secretary Lovett pointed out that colossal savings in the costs of the energy release required to do this job could be expected from the use of atomic weapons, which were, he said, the most efficient energy-releasing units that the world had ever seen. One ton of TNT used in ordinary bombs now costs \$1700. The same explosive effect could actually be obtained from fissionable materials at a cost of only

Secretary Lovett then asked General Vandenberg to enlarge on the subject with which he had been dealing.

GENERAL VANDENBERG explained the difficulties that the three Services had encountered in their attempt to make a judicious division of the atomic weapons resources available to them. He pointed out that recent technological advances had brought in the Army, as well as the Air Force and the Navy, as having legitimate demands on the stockpile of weapons. While we knew much less about the target systems for the Soviet Union than we had known for Germany in the last war, it was believed that there were perhaps five or six thousand Soviet targets which would have to be destroyed if the war-making potential of the USSR were to be destroyed in the event of war. It would be impossible to accomplish this task unless many more bombs were available. Moreover, room must be left for a considerable margin of error in our knowledge of significant targets in the Soviet Union. General Vandenberg concluded by restating Secretary Lovett's minimum requirements figure.

THE PRESIDENT then turned to Secretary Acheson and inquired his opinion as to the possibility that present disarmament negotiations with the Soviet Union might lead to a situation in which firm agreements could be achieved.

SECRETARY ACHESON said that he was obliged to reply that any such disarmament agreement was highly unlikely in the course of the period covered by the JCS expansion program. He added his own

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emphatic agreement with the recommendations of the Department of Defense, stated that he felt it was very important to assure these minimum requirements in weapons, and stated his belief that the impact of the new program would probably come at a time when the economy of the country could stand it.

THE PRESIDENT observed that the dilemma in which we found ourselves was not unlike that occasioned during the last war by the necessity to manufacture poison gasses even though we devoutly hoped that they would not have to be used, which turned out to be the case.

SECRETARY LOVETT commented that while the analogy was a good one, in point of fact fissionable materials, unlike the gasses alluded to by the President, were not entirely wasted but could be reworked and used again.

MR. DEAN agreed in general with Secretary Lovett's point, but emphasized that if you were thinking of using increased amounts of fissionable materials for peacetime purposes, you would certainly not build the kind of facilities which were contemplated in the present expansion program. In short, said Mr. Dean, we must not kid ourselves that this production will have peacetime uses, even though the materials themselves would not be dissipated and indeed would be usable even after five thousand years.

THE PRESIDENT observed that none of us need worry about conditions after five thousand years. What concerned him was the overhead that is needed and what constituted waste over and beyond the fissionable materials themselves. He presumed this included the cases for atomic weapons and the like.

MR. DEAN reiterated that from the point of view of peacetime uses the facilities at Oak Ridge and Hanford, and so on, must be described as wasted. You would not build such facilities for production for peaceful purposes.

Mr. Dean then went on to state his general position with respect to the 50%-150% expansion program. He pointed out that because the AEC had not come out strongly in favor of this expansion, it was not to be inferred that the AEC opposed it. What he and the other Commissioners wanted was to assure that the problem was discussed in the National Security Council, where all the pertinent considerations could be thoroughly explored.

Mr. Dean then discussed the problems of the rate and timing of fissionable materials production, under various alternative programs, by the use of charts. These indicated, according to

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### Using Source 11

<p><b>Sourcing Questions</b> What type of source is this?</p> <p>Who is the conversation between?</p> <p>When did this conversation take place?</p>	
<p><b>Contextualization Questions</b> Who is Secretary Acheson? What department does he head?</p>	
<p><b>Corroboration Tasks</b> According to Acheson, how likely is it that a disarmament agreement can be reached?</p>	
<p><b>Close Reading Questions</b> What is the dilemma that the United States find itself in?</p>	

## Source 12

Source Information: Memorandum to the President Report by the Chairman of the Atomic Energy Commission, November 4, 1949

E. O. 14652, Sec. 3(E) and 5(D) or (E)

OSD letter, April 12, 1974

By NLT: HL, NARS Date 9-3-75

~~TOP SECRET~~

18 Nov. '49

### MEMORANDUM FOR THE PRESIDENT

SUBJECT: Report by the Chairman of the Atomic Energy Commission - 9 Nov. '49

The subject report raises the question as to whether the United States should now proceed with the construction of a "super" bomb. The report itself does not provide sufficient information to establish a basis for resolution of this question. Such a resolution requires in part, and as a prerequisite, a determination of government policy.

However, the very possibility of the construction of such an absolute weapon makes at least one thing abundantly clear; namely, the urgent need for the effective elimination of weapons of mass destruction from national arsenals. Since such elimination could only operate to establish conditions at the outbreak of a war there is need ultimately to establish a world order which will abolish war itself as an instrument of national policy. These needs have long been recognized. The appearance of the super bomb emphasizes the urgency of the necessity for satisfying them.

Before an intelligent analysis of the many problems posed by the appearance of the possibility of a "super" bomb can be made and appropriate conclusions developed, more information is needed, much of it of a technical nature. In order to obtain such information, evaluate it, coordinate it and finally produce the basis for a policy determination, a high level committee is needed.

It seems apparent that whatever the decision may be regarding the construction of a "super" bomb we now have a most potent and perhaps critical tool to assist in our negotiations for world peace. I, therefore, offer for your consideration a proposal that you appoint a sub-committee of the Security Council comprising the following: - The Secretary of State,  
The Secretary of Defense, and  
The Chairman of the Atomic Energy Commission.

This Committee should be permitted to develop its own terms of reference for your approval and should be directed to form its own working staff, presumably comprising such members as Mr. Keenan, Mr. Oppenheimer, Mr. Conant, General Norstad and others of similar caliber.

The Committee should be charged, of course, in developing its terms of reference, to address themselves to all matters of policy which arise from the appearance of the possibility of the construction of a "super" bomb.



*Robert D. ...*

*Orig - Pres  
2nd Copy - Mr. Lay  
3rd " - file copy*

Using Source 12

<p><b>Sourcing Questions</b> Who sent this report to the President?  What is his position?</p>	
<p><b>Contextualization Questions</b> What is the report saying will be the main benefit from the development of the “Super Bomb”?</p>	
<p><b>Corroboration Tasks</b> Who is recommended for being a part of the sub-committee?  Why do you think this particular group would be on this sub-committee?</p>	
<p><b>Close Reading Questions</b>  What is the main discussion in this memorandum?</p>	

