SIMUN VII

MED STUDY GUIDE

The Manhattan Project was a monumental effort during World War II that marked a pivotal moment in scientific and military history. Beginning in 1942, as a response to fears of a possible Nazi German Nuclear Bomb, the U.S. government recognized the need to mobilize its scientific and industrial resources to prevent this potential threat. The U.S began recruiting some of the brightest minds from the physics and engineering world. Many scientists recruited for this effort were refugees from Europe, bringing invaluable expertise. The U.S. Army was heavily involved in the project, with General Leslie Groves overseeing operations. The military provided the necessary funding and resources, facilitating coordination between various scientific and industrial efforts. Many Industrial companies were contracted to help aid the project. Large facilities for uranium enrichment and plutonium production, such as the Oak Ridge National Laboratory, were set up. The MED was created under the supervision of President Franklin D.Roosevelt, who was responsible for the construction and execution of the facilities involved with the Manhattan Project. The U.S Army Corps of Engineers also played a crucial part in the creation of the MED. They were also tasked with selecting sites for production facilities and overseeing their construction. The Corps coordinated with both the military and civilian contractors; their engineering expertise was vital in overcoming the technical challenges of building complex facilities under tight deadlines. The Corps implemented strict security measures to protect the project from espionage and potential leaks.

At SIMUN VII, MED presents delegates with the ability to reshape history and move the project in their own direction.

Background

The Manhattan Project was a top-secret U.S. research and development initiative during World War II that produced the world's first atomic bombs. It began in 1942, driven by fears that Nazi Germany might be developing a similar weapon after the 1938 discovery of nuclear fission by German scientists Otto Hahn and Fritz Strassmann. Named after the Manhattan Engineer District of the U.S. Army Corps of Engineers, the project was led by General Leslie R. Groves and physicist J. Robert Oppenheimer.

The program brought together some of the greatest scientific minds of the era, including Enrico Fermi and Niels Bohr, and operated across several classified sites, most notably Los Alamos (New Mexico), Oak Ridge (Tennessee), and Hanford (Washington). Two types of atomic bombs were developed: one based on uranium-235 and the other on plutonium-239. The first successful detonation, known as the Trinity Test, occurred in July 1945 in the New Mexico desert. Shortly thereafter, the bombs were dropped on Hiroshima and Nagasaki, leading to Japan's surrender and the end of World War II, marking the beginning of the nuclear age.

Main Reasons

The Manhattan Project was launched primarily out of concern that Nazi Germany might develop an atomic bomb first. Following the discovery of nuclear fission in 1938, physicists such as Albert Einstein and Leó Szilárd warned President Franklin D. Roosevelt that this breakthrough could lead to a new, devastating form of weaponry. Their warning prompted the United States to take immediate action.

Beyond fear of German advancement, the project reflected the broader wartime drive for technological and military superiority. Harnessing atomic energy promised a decisive means to end the war and secure U.S. global leadership. Ultimately, the Manhattan Project symbolized the fusion of science, industry, and military ambition, forever altering the course of history.

Timeline of the Manhattan Project

1938 – Discovery of Nuclear Fission
German scientists Otto Hahn and Fritz Strassmann discover nuclear fission, demonstrating that splitting uranium atoms releases a tremendous amount of energy. Physicists Lise Meitner and Otto Frisch, working in exile, correctly interpret the process and explain how it could unleash energy far greater than any known chemical reaction. This discovery marks the scientific foundation for nuclear weapons.

1939 – The Einstein–Szilárd Letter and U.S. Response
Alarmed by reports that Nazi Germany might exploit fission for military use, physicists Albert Einstein and Leó Szilárd write a letter to President Franklin D. Roosevelt, warning him of the potential for a powerful new bomb. In response, Roosevelt creates the Advisory Committee on Uranium, beginning the United States' first organized research into nuclear energy. This marks the earliest step toward what would later become the Manhattan Project.

1940–1941 – Early Research and Growing Cooperation
During this period, American and British scientists intensify their nuclear research efforts. Studies

focus on uranium enrichment and the potential for chain reactions that could release explosive energy. The U.S. government expands funding for atomic research under the National Defense Research Committee (NDRC) and the Office of Scientific Research and Development (OSRD). Meanwhile, British scientists working on Project Tube Alloys share their findings with the United States, strengthening transatlantic scientific collaboration. These efforts lay the groundwork for large-scale development.

1942 – Formation of the Manhattan Engineer District

In June 1942, the U.S. Army Corps of Engineers established the Manhattan Engineer District (MED) to manage the secret atomic bomb program. Brigadier General Leslie R. Groves is appointed military director, bringing rigorous organization, secrecy, and urgency to the project. J. Robert Oppenheimer, a theoretical physicist from the University of California, Berkeley, is selected as scientific director to coordinate research and design.

Key production and research sites are chosen across the country to distribute work and maintain secrecy:

- **Oak Ridge, Tennessee** – Uranium enrichment using gaseous diffusion and electromagnetic separation.
- **Hanford, Washington** – Large-scale plutonium production in nuclear reactors.
- **Los Alamos, New Mexico** – Central design and assembly laboratory for the atomic bomb, led by Oppenheimer.

1943 – Construction and Scientific Mobilization

Massive construction begins at the Oak Ridge and Hanford facilities, employing tens of thousands of workers. Industrial partners such as DuPont and Union Carbide are brought in to manage operations and production. At the newly established Los Alamos Laboratory, top scientists, including Enrico Fermi, Niels Bohr, and Richard Feynman, arrive to begin the complex process of designing and assembling the bomb. Despite wartime shortages and secrecy, the project advances rapidly, blending science, engineering, and military discipline on an unprecedented scale.

Starting Point for the Committee (1944)

By 1944, the Manhattan Engineer District had moved from rapid expansion into intense, high-stakes execution. Hanford's reactor complex had come online and began producing usable quantities of plutonium, giving the project a second practical path to a weapon in addition to the uranium program at Oak Ridge. With real material now being produced, the MED shifted from construction and theory into the final, most delicate phase: weapon design, logistics and resource management, and readiness for deployment. Los Alamos became the nerve center for converting raw fissile material into a deliverable device, while Oak Ridge and Hanford settled into full industrial production rhythms, each site tightly interdependent and driven by strict secrecy.

The atmosphere in 1944 was defined by a desperate tempo: the United States genuinely believed it was racing to finish a bomb before enemy powers could. Early fears had focused on Nazi Germany, and although by 1944 Germany's defeat was increasingly likely, the pressure did not abate—there was also concern about the wider course of the war in the Pacific and the strategic necessity of a decisive means to end it. This urgency translated into intense military oversight and a single-minded push for results. General Leslie Groves exercised heavy administrative authority to prioritize materials, labor, and industrial capacity; contractors and government agencies were pushed to meet aggressive schedules and secrecy requirements.

At the same time, 1944 saw the emergence of significant ethical and scientific debate within the project. Many physicists and engineers who had been drawn to the work by scientific curiosity or urgent wartime necessity began to confront the moral consequences of creating a weapon of unprecedented destructive power. Questions about when and whether such weapons should be used were already circulating inside the laboratories and among exiled and émigré scientists, even if formal petitions and reports (which would appear in 1945) came later, the moral unease and intellectual debate were clearly germinating in 1944.

Mounting military expectations, combined with the novelty and secrecy of the program, also created a climate of suspicion. Security concerns and the fear of information leaks grew as the project's importance became apparent to both U.S. intelligence services and adversaries. Throughout 1944, there were early suspicions of espionage and unauthorized disclosures, and security protocols tightened accordingly. These suspicions proved well founded: in subsequent years evidence emerged that several individuals had passed nuclear information to the Soviet Union. In 1944, however, the full extent of espionage was not yet known; what was clear then was a rising tension between openness required for scientific collaboration and the extreme secrecy demanded by national security.

In short, 1944 is the point where the committee takes off. With the Manhattan Project stoping a dispersed effort to understand atomic science and becomes a coordinated, state-scale enterprise focused on producing an operable weapon, one driven by urgency, ethical unease, industrial might, and a growing paranoia about leaks. The committee that would oversee the final push now had to manage not only technical problems, but also the human, political, and moral consequences of what they were building.

Expected Areas of Debate (Beyond Crisis Updates)

1. **Scientific Direction and Research Priorities**
   Delegates will frequently debate over *which scientific paths or technologies the MED should prioritize*. These debates form the backbone of the committee's policy and technical discussions. Possible Motions to discuss:
   a. √Whether to prioritize uranium-based (U-235) or plutonium-based (Pu-239) bomb design.
   b. Allocation of funding between Oak Ridge, Hanford, and Los Alamos.
   c. The feasibility and efficiency of different enrichment methods (gaseous diffusion, centrifuge, electromagnetic separation).
   d. Balancing theoretical physics vs. engineering production — which deserves more resources?
   e. Should further testing delay deployment for safety, or proceed urgently for war needs?

2. **Military Logistics and Security**
   Since the MED was a military-run project, debates will often cover *operational secrecy, safety, and coordination*.
   Possible Motions to discuss:
   a. Should stricter security be imposed at Los Alamos after reports of espionage?
   b. How much autonomy should scientists have from military supervision?
   c. Should security breaches result in arrests, surveillance expansion, or internal censorship?
   d. Military vs. civilian control of the project: who leads final decision-making?
   e. Coordination with British and Canadian allies, helpful collaboration, or a security risk?

3. **Ethical and Moral Dilemmas**
   Delegates must also tackle the *philosophical and humanitarian implications* of the atomic bomb, this is where the debate becomes emotional and deeply political.
   Possible Motions to discuss:
   a. Should the bomb be used on Japan, demonstrated first, or kept as a deterrent?
   b. Is the mass destruction of civilians ever justifiable in wartime?
   c. Should scientists have a say in how their work is used by the government?
   d. What postwar framework should control nuclear weapons — U.S. only, or international oversight?
   e. The moral cost of secrecy: Is the world safer when knowledge is hidden?

4. **Political and Strategic Oversight**
   The Manhattan Project was not isolated, national politics, public image, and diplomatic maneuvering deeply influenced it.
   Possible Motions to discuss:
   a. Should information be shared with the Soviet Union, Britain, or kept strictly classified?
   b. How much should President Roosevelt (and later Truman) be briefed on scientific progress?

c. Should Congress or the public know about the project’s costs and purpose?
d. Managing government sponsors: how to retain funding despite secrecy?
e. Planning for postwar nuclear policy: deterrence, diplomacy, or disarmament?

5. Internal Management and Bureaucratic Conflict

Debates may also center around *how the MED itself should operate*, with delegates competing to influence internal hierarchy and efficiency.

Possible Motions to discuss:

a. Distribution of manpower between sites (Los Alamos vs. Hanford vs. Oak Ridge).
b. Handling of worker strikes, safety issues, or construction delays.
c. Division of funds between research, security, and infrastructure.
d. Leadership disputes: Should Groves centralize power or decentralize command?
e. Replacing inefficient project heads or creating new departments.

6. Public Image and Historical Legacy

Although secrecy dominated the project, delegates may still debate *how history will remember their actions*.

Possible Motions to discuss:

a. How should the Manhattan Project be presented to the public after the war?
b. Should the U.S. reveal the bomb’s existence as a warning or maintain secrecy?
c. Should scientists receive recognition or remain anonymous under government secrecy laws?
d. What steps should be taken to ensure that nuclear science is used peacefully afterward?

Chair Roles and Powers

In this committee, the Chairs will assume the roles of **U.S. Secretary of War Henry L. Stimson** and **Brigadier General Leslie R. Groves**, the two key figures responsible for overseeing and coordinating the Manhattan Engineer District (MED). Their positions represent the highest level of authority within the project's administrative and military hierarchy, functioning as both facilitators and arbiters of the crisis.

As Henry L. Stimson, the Secretary of War, the Chair will embody the political and ethical leadership of the U.S. government. Stimson's responsibilities include ensuring the project's alignment with wartime objectives, securing funding from Congress, maintaining political secrecy, and providing external updates regarding the progress of World War II. His decisions reflect the broader governmental perspective, balancing scientific ambition with national policy, moral responsibility, and military necessity.

As Brigadier General Leslie R. Groves, the commanding officer of the Manhattan Engineer District, the Chair will control the logistical, security, and operational aspects of the project. Groves serves as the central link between the scientists, the U.S. Army Corps of Engineers, and the War Department. He oversees site construction, allocates resources, approves new research ventures, enforces discipline, and manages the immense industrial machinery driving the project.

Together, the Chairs, acting as Stimson and Groves, hold the authority to:

- **Control Funding:** Approve, deny, or redirect budget allocations for research, construction, or weapon development.
- **Authorize Research Projects:** Sanction or terminate scientific initiatives proposed by committee members through directives.
- **Provide War Updates:** Deliver regular updates from the global warfront, shaping the committee's urgency and influencing decision-making.
- **Enforce Security Measures:** Manage the handling of classified information, personnel clearances, and responses to espionage or internal leaks.

Ultimately, the Chairs serve as both narrative drivers and institutional authorities, bridging the gap between internal MED dynamics and the broader context of the Second World War. Their dual roles ensure the committee remains dynamic, realistic, and grounded in the historical challenges faced by the Manhattan Project's leadership.

Control of Funding

The Chairs, representing Secretary of War Henry L. Stimson and General Leslie R. Groves, will have direct control over the Manhattan Engineer District's (MED) financial resources. They will begin the committee by announcing the initial pool of government funding and private sponsorships allocated to the project. These funds represent the total resources available to the delegates for research, construction, operations, and logistical initiatives.

Throughout the session, this funding may increase or decrease based on the delegates' actions, decisions, and directives. Effective and innovative project management may attract new sponsors or additional government backing, while wasteful spending, ethical scandals, or security breaches could cause investors or the War Department to withdraw support.

When delegates pass a public directive, the Chairs will determine how much funding is required for each proposed action. For example, if a directive includes both the research of a new isotope and the construction of a containment facility, the Chairs will assign specific funding costs to each part. If the MED's available funds cannot cover both, the directive will "partially pass."

Priority will be determined by order; the first listed action receives precedence, while the last receives the least. This system ensures strategic budgeting and compels delegates to think carefully about the scope of their directives. Mismanagement of funds can have long-term effects, potentially halting vital projects or damaging the committee's overall progress.

Authorization of Research Projects

The Chairs also possess the authority to approve, deny, or modify research projects proposed by committee members through public or private directives. Every scientific or engineering initiative, ranging from uranium enrichment studies to bomb yield simulations, must be sanctioned by the Chairs before implementation.

This mirrors General Groves' real-life control over scientific operations and resource allocation within the MED. Delegates must therefore justify their proposals with clear objectives, feasibility, and strategic value. Projects that align with wartime priorities or demonstrate practical potential will be fast-tracked, while redundant or risky proposals may face rejection or postponement.

Additionally, the Chairs may call for progress reports on ongoing projects, redirect scientific personnel, or merge overlapping initiatives. This ensures that research across Oak Ridge, Hanford, and Los Alamos remains coordinated and goal-oriented.

War Updates and Security Oversight

The Chairs will also guide the flow of crisis updates, representing the dynamic world beyond the MED's laboratories and offices. These updates, delivered periodically throughout the committee, will include, but not be limited to:

- **War Updates:** Information from the global frontlines, including Allied advances, Axis scientific developments, or political pressures from Washington. These will affect urgency, morale, and national priorities.

- **Security Measures:** Reports of espionage, leaks, or internal sabotage within the project. Delegates may be forced to respond with investigations, purges, or enhanced secrecy protocols.
- **Research Breakthroughs and Failures:** Notifications of experimental success or catastrophic setbacks that can reshape the committee’s direction.

Through these updates, the Chairs control the evolving crisis narrative, forcing delegates to adapt in real-time, balancing scientific ambition with national security, ethics, and resource scarcity.