In October of 1939, the United States became concerned about the fission research efforts occurring in Nazi Germany. To express their concerns, two recent immigrant scientists, Albert Einstein and Leo Szilard drafted a letter to President Franklin Delano Roosevelt. Within a month's time, President Roosevelt established the Advisory Committee on Uranium. This research group was provided a limited budget of approximately $150,000. Projects were to only include uranium isotopic separation. Two University of Columbia physicists were assigned accomplish this task. With a very limited budget, Enrico Fermi and Leo Szilard were expected to surpass any uranium efforts that Nazi Germany had already accomplished. Click on this link to visualize how these scientists felt about this project.

![Figure 1](link) The letter written by Einstein and Szilard to President Franklin D. Roosevelt.

At this time, President Roosevelt attempted to pacify these nuclear scientists by allocating this amount of research funding. Feeling fearful, this group of researchers continually pleaded for more money and facilities where they could expand their projects. President Roosevelt denied their requests until Pearl Harbor was bombed in December of 1941. After this, Roosevelt established the Manhattan Project which was to focus on research and construction of an atomic bomb. He placed Leslie R. Groves, head of the U.S. Army Corps of Engineers, to organize and lead this undertaking.
FigurePageIndex(2)): General Leslie R. Groves and J. Robert Oppenheimer. Images taken from: https://upload.wikimedia.org/wikipedia/commons/0/03/lie_Groves.jpg and https://upload.wikimedia.org/wikipedia/commons/0/03/
General Groves assigned J. Robert Oppenheimer to lead the top secret laboratory that would construct the first atomic bomb. At the time, Oppenheimer was a theoretical physicist employed at the University of California, Berkeley. Both Groves and Oppenheimer would work together for over four years to complete this project.

Example 1:

Watch the first installment of the History Channel's Modern Marvel Series (total time: 10:59) and answer the questions below:

1. How much money was spent on the making of the atomic bomb (1940's and today's estimates)?
2. Why did Teller, Einstein, Szilard, and Bethe flee Europe?
3. What country discovered fission and which element was investigated to prove this?
4. How did Enrico Fermi escape Italy?
5. How did FDR first get introduced to the idea of atomic fission? What event encouraged him to allocate more funds to this research project?
6. Which isotope is more useful for the construction of nuclear weapons: U-235 or U-238?
7. What two processes were used for uranium enrichment? Where would these processes be done?
Contributors

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