

*U.S. Ingenuity and the Manhattan Project's Resulting Success*

By the late 1930's, the United States was home to people of many different backgrounds. As an epicenter of both freedom and opportunity, the U.S. was a prime candidate for the development of an atomic bomb, as many scientists escaped from the wrath of the Axis powers with tensions worsening overseas. Figures like Niels Bohr, Enrico Fermi and Leo Szilard were able to continue their studies on nuclear fission in the American science community at various labs and universities across the nation, such as UC Berkeley. Unlike other powerful countries like Russia (USSR) and Great Britain, America had the facilities and manpower necessary to accelerate progress beyond the theoretical stage. This was largely in part due to private corporations like DuPont and Harshaw being able to supply necessary resources, namely Uranium, for research purposes until it was sufficient enough for S-1 to begin working with the Army Corps of Engineers in the Manhattan Project. During World War II, no other nation could come close to providing as much material, personnel and financial support as the U.S. while simultaneously maintaining a (mostly) private operation. To add to this, General Leslie R. Groves was skilled and motivated enough to both direct S-1 and manage the sites at Clinton Engineer Works (Oak Ridge) and Hanford. By ensuring facilities were run fast and efficiently enough to move the Manhattan Project from a theory in 1939 to a possibility by 1943, it was thanks to his leadership that the project was able to enhance the production of plutonium through two new facilities in less than three years, and ultimately utilize the pile design to develop the atomic bomb. Along with Groves, American physicist Robert Oppenheimer expressed his expertise at running the project on the scientific end, recruiting the best minds available to complete the production of

Project Y. Thanks to the leadership of both Oppenheimer and Groves, the project was able to finish relatively on time by July 16, 1945. Because of the state of the world during this time period, it made sense that the United States would end up winning the nuclear arms race. The country attracted brilliant individuals from around the world to continue their research and theories away from the ever expanding wrath of the German Reich. Having the facilities and resources to support their research privately and in a timely manner, the U.S. still would have had the upper hand even without the already established institutions like Columbia and Princeton, as was shown that even in a time of war, projects like Los Alamos, Hanford, and Oak Ridge were quickly implemented. Beyond this, impeccable leadership from well-established figures like Roosevelt, Bush, General Groves and Oppenheimer successfully guided the project through hardships all the way to the Trinity tests in 1945. All in all, the Manhattan Project was an example of what characteristics made the U.S. the leading world power after the time of the second World War.