

DEFYING THE ODDS

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Investing two billion dollars in an attempt to build an atomic bomb in the midst of World War II was a serious gamble. While physicists understood that enormous energy would be released when the nucleus of an atom was split, harnessing that energy would be an immensely complex challenge. The odds of accomplishing this feat before the end of the war were slim.



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When General Leslie Groves decided to choose J. Robert Oppenheimer to lead the project, most who knew Oppenheimer were skeptical. While Oppenheimer was widely acknowledged as a brilliant theoretical physicist, he had little management experience to prepare himself for the task of directing what would be the most ambitious scientific and engineering undertaking of the twentieth century.

At Berkeley, Oppenheimer had a reputation for being a “smart aleck,” often arrogant and impatient with those who could not keep up with him intellectually. Could Oppenheimer recruit and lead a team of hundreds of scientists and engineers, military and support staff under highly pressured and trying circumstances? These

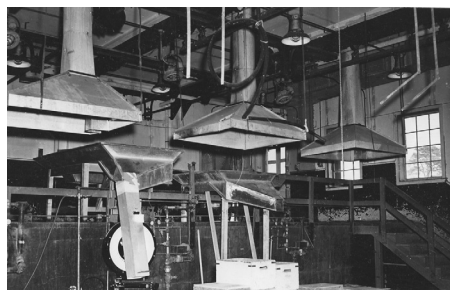


Oppenheimer at Berkeley

reservations, coupled with Oppenheimer's alleged Communist Party affiliations, made his successful tenure as director of the project's laboratory at Los Alamos seem improbable.

Despite the long odds, the atomic bomb was produced in time to bring an end to the war. Oppenheimer quickly proved himself to be an exquisite manager of people, able to effectively motivate and deploy even those with problematic personalities. While Robert R. Wilson expressed grave doubts at first, "He had style and he had class," Wilson told an interviewer in 1982, "He was a very clever man. And whatever we felt about his deficiencies, in a few months, he had corrected those deficiencies."¹ Oppenheimer's charisma, brilliance, and personal command of all aspects of the project made him an extraordinary leader.

The government's two-billion-dollar gamble paid off, bringing an end to World War II and establishing the United States as a super power. However, preserving some of the tangible properties of the Manhattan Project continues to face long odds. Across the nation, most of the last remaining properties from the Manhattan Project owned by the Department of Energy are slated to be demolished as part of the environmental cleanup of the nuclear weapons complex.



S Site, Room 24

Courtesy of the Los Alamos Historical Society

At Los Alamos, the Laboratory has identified a dozen properties of the fifty properties left in its study called "Sentinels of the Atomic Dawn." While \$700,000 is available from a Save America's Treasures grant, additional funds will be needed to stabilize, protect and restore these properties for future generations.

At Oak Ridge, the K-25 plant was the world's first gaseous diffusion plant and produced enriched uranium for the Hiroshima bomb. A U-shaped building with each of its arms extending one-half mile, the K-25 plant and over one hundred other properties at the site are slated for demolition. Discussions

¹Bird and Sherwin, quote from Robert R. Wilson interview with Owen Gingrich, 23 April 1982, p. 4.

between the Department of Energy, the Advisory Council for Historic Preservation, the Commonwealth of Tennessee and concerned parties are currently focused on preserving the North End of the K-25 plant, three of the 54 units that make up the plant. However, funds need to be found very soon to preserve this section or in a few years there will be nothing left of one of the engineering marvels of the twentieth century.

At Hanford, the fate of the B Reactor along the shores of the Columbia is scheduled to be decided by the fall of 2005. Itself an engineering marvel, the B Reactor was designed by Enrico Fermi and his team of physicists at the University of Chicago. Pressured by President Franklin Roosevelt to take on the task of constructing the reactor, the DuPont Company then translated these concepts into engineering blueprints and assembled 50,000 workers to build and operate it.

While the B Reactor has been open to the public for nearly twenty years, the Department of Energy is planning to “cocoon” it, a process that would destroy the reactor building and its historic integrity. The only prospect of preserving it is to find an organization willing and able to commit to its long-term operation and maintenance. One option is to incorporate the B Reactor and other properties from the Manhattan Project into the national park system.

To investigate this alternative, Senators Domenici and Bingaman have sponsored legislation to authorize a study to explore the feasibility of creating a national park unit at one or more of the Manhattan Project sites.² The study will explore various management alternatives with continuing roles for the Department of Energy as well as other Federal, State and local agencies that have or may want to play various roles at these sites.

In addition, the FY 2004 Energy and Water Appropriations Act provided one million dollars to take urgent actions to preserve the Manhattan Project properties. The funds were intended to enable the Atomic Heritage Foundation to continue its efforts nationwide and for the Manhattan Project communities to address priorities such as capturing oral histories and stabilizing or restoring properties and artifacts that are in danger of being lost to future generations.

In August 2004, the Atomic Heritage Foundation completed its report to the Department of Energy on how best to preserve the most significant

²The Manhattan Project National Historic Park Site Study Act (PL 108-370).

Manhattan Project properties and this history.³ The report considers the costs of restoration and long-term stewardship as well as alternative management strategies using local, state and other federal agencies, nonprofit organizations and private resources. Because a number of decisions are still pending and the difficulty of getting cost estimates for preservation, the report remains a “work in progress.”

How long are the odds that we will be able to save some of the heritage of the Manhattan Project? We have made a lot of progress in the last five years but time is very short as the Department of Energy has many of these properties in its sights for demolition. Is there sufficient public support? On the one hand, there is enormous national interest in World War II. However, because of the cloak of secrecy concerning nuclear weapons production, many people do not know about the Manhattan Project and its role in World War II. Surveys of those who visit the immensely popular Spy Museum in Washington, DC, find that ninety percent of visitors do not know what the Manhattan Project was.

And yet, the development of the atomic bomb was one of the most significant events of the twentieth century. As Richard Rhodes commented at the Atomic Heritage Foundation’s symposium in April 2002: “The closing days of the Second World War mark a turning point in human history, the point of entry into a new era when humankind for the first time acquired the means of its own destruction.” The legacy of the atomic bomb has permeated every aspect of our lives and dominates world politics from Iraq to North Korea.

To understand the twenty-first century world we live in, we must understand the history of the atomic bomb and its indelible legacy. Having some of the tangible remains of the Manhattan Project will help to bring the public back to World War II when Hitler had taken over much of Europe and was thought to be developing an atomic bomb. Here, scientists and engineers had to draw upon their ingenuity, resourcefulness and determination as there were no high-speed computers or sophisticated electronics. They were truly working on the frontiers of science, with just microscopic quantities of uranium-235 and plutonium that needed to be analyzed and produced in quantities sufficient to fuel an atomic bomb.

³This report, “Preserving the Remains of the Manhattan Project,” is available at <http://www.atomicheritage.org/articles.htm> or by calling the Atomic Heritage Foundation, 202-293-0045.

By witnessing first-hand the humble wooden sheds at Los Alamos where key components of the bomb were assembled, the public can begin to grasp some of the makeshift aspects of the effort. Preservation of some of the key properties is essential to understanding how the United States and her allies won the race to develop the world's first atomic bomb, changing the course of history forever.

The odds may be long but with the support and leadership of Senators Domenici and Bingaman, Governor Bill Richardson, the Los Alamos National Laboratory, Los Alamos County Council, Los Alamos Historical Society, and many other organizations that are working in partnership with the Atomic Heritage Foundation, I believe we can beat those odds. Like the Manhattan Project workers, we need to draw upon our ingenuity, resourcefulness and determination and work as a team.

Thanks for your interest and help in this venture.