Launching the Park

Annual Report 2014
Commemorating the Manhattan Project

“There is no group of people in this country whose record over the last 20 years has been more pre-eminent in the service of their country than all of you here in this small community in New Mexico. We want to express our thanks to you. It is not merely what was done during the days of the second war, but what has been done since then not only in developing weapons of destruction which, by an irony of fate, help maintain the peace and freedom, but also in medicine and in space and all the other related fields, which can mean so much to mankind if we can maintain the peace and protect our freedom.

“So you here in this mountain town make a direct contribution, not only to the freedom of this country but to those thousands of miles away. And therefore, I am proud, as President of the United States, to come here today and express our thanks to you, and to also tell you how much I have admired from some years ago, from reading an article about the kind of schools that you run here and the kind of boys and girls that you are bringing up. We hope from them the same kind of service that you have rendered. Thank you to you all.”

~President John F. Kennedy at Los Alamos in 1962

Top photograph: Members of the Chicago Pile-1 team at the University of Chicago.
Front cover: The Chapel on the Hill in Oak Ridge.
Back cover: The B Reactor at Hanford.
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The AHF would like to recognize the following who have generously contributed to our efforts in 2014:

Crystal Trust ♦♦♦♦
The M. J. Murdock Charitable Trust ♦♦♦♦
Institute of Electrical and Electronics Engineers ♦♦
City of Richland ♦
National Trust for Historic Preservation ♦
Hanford Reach Interpretive Center ♦
James A. Schoke ♦

♦♦♦♦ $150,000 and up
♦♦ $50,000
♦♦$25,000 and up
♦ $10,000 and up
Dear Friends:

This has been a banner year for the Atomic Heritage Foundation (AHF). Fifteen years after initial efforts to preserve some of the Manhattan Project properties at Los Alamos, the Manhattan Project National Historical Park Act became law on December 19, 2014. The new park will have units at Los Alamos, NM, Oak Ridge, TN, and Hanford, WA, once “secret cities” not on any map.

AHF is deeply grateful for the leadership of the bipartisan Manhattan Project Congressional delegation. Thanks, too, to our partners in the National Trust for Historic Preservation, National Parks Conservation Association, Energy Communities Alliance and many others. Our nationwide, collaborative effort to push the legislation through was essential to our success.

The park will be one of the few National Parks to focus on American science, engineering and technology. The Manhattan Project’s alliance of government, academia and industry inaugurated “Big Science” and transformed the relationship between science and society over the coming decades. Hundreds of thousands of people kept the project a secret as General Leslie Groves built independent intelligence and counterintelligence forces. Despite these measures, the Soviets soon had a blueprint for an atomic bomb thanks to Klaus Fuchs, Ted Hall and other spies. The Manhattan Project offers a fascinating array of stories along with many issues for reflection as we consider the complex history and legacy of nuclear weapons.

The Secretary of the Interior and the Secretary of Energy have one year to develop an agreement before the park becomes official. This agreement will address public access, management, historic preservation, interpretation and other issues. We anticipate that it could be several years before some of the properties are open to the public on a regular basis. For a preview of what might be in the new park, please see the story beginning on page 5.

Another major milestone is our “Voices of the Manhattan Project” website that now has over 250 interviews with more in the works. We are now processing over 180 interviews taken by noted historians Stephane Groueff, S. L. Sanger and Richard Rhodes. These include recordings of General Leslie Groves, J. Robert Oppenheimer and other Manhattan Project leaders taken in 1965. Our goal is to continue to add new interviews, mine archival recordings and create as robust a central repository of oral histories of the Manhattan Project as possible.

A related initiative is our “Ranger in Your Pocket” website which eventually will have a series of tours of the Manhattan Project sites. The program is designed to let visitors use their smartphones and tablets to take self-guided tours. Each tour will have about 20 to 25 audio/visual selections that incorporate excerpts from oral histories. Visitors can listen to participants explain the challenges of living in a frontier community or inventing equipment to handle radioactive materials safely. For more, see the story on page 11.

Thanks very much for your valuable support as the new park unfolds!

With best wishes,

Sincerely,

Cynthia Kelly
The new park will focus on three major sites: Los Alamos, NM, where the scientific laboratory that designed and tested the bomb was located; Oak Ridge, TN, where facilities were built to produce enriched uranium; and Hanford, WA, dedicated to the production of plutonium.

For each of these sites, the legislation designates both properties associated with the research and production of the bomb and the social and cultural life of the “secret cities.” There are over 40 properties that are officially designated as eligible to be part of the park with provision for adding others later that contribute to interpreting the Manhattan Project. Here is a preview of the properties at each of the three sites. Other sites may be recognized as associated or affiliated sites in the future.

**Los Alamos, NM.** The legislation incorporates 17 properties owned by the Los Alamos National Laboratory where research on the bomb took place. In addition, the new park includes 13 properties in the Los Alamos community. These include several of the former Masters’ cottages on Bathtub Row where the top-echelon scientists and military leaders lived.

Two cottages will soon be open to the public, the J. Robert Oppenheimer House and the Hans Bethe House, and could be the “jewels in the crown” of the visitors’ experience. Nearby, the public can visit the Guest House, now the Los Alamos Historical Museum, and the Fuller Lodge, a handsome ponderosa pine structure that was a social center for the Manhattan Project.

**Oak Ridge, TN.** Three properties that were essential to produce plutonium and enriched uranium, the X-10 Graphite Reactor, the Y-12 Plant, and the K-25 Plant site, will be part of the park. In addition, the park will feature the former Guest House (later called the Alexander Inn) built to accommodate distinguished visitors such as General Leslie Groves, Enrico Fermi, and Ernest O. Lawrence.

**Hanford, WA.** The park will preserve two iconic Manhattan Project properties: the B Reactor, the world’s first full-scale plutonium production reactor, and the T Plant, used to separate plutonium from the irradiated fuel rods.
In addition, four pre-World War II properties are slated to be preserved: the Hanford high school, White Bluffs bank, an agricultural warehouse owned by the Bruggemann family, and the Hanford irrigation district pump house. With these properties, the stories of the pioneering agricultural families as well as the Native Americans who lived, hunted and fished in the Columbia River can be told.

At each site, visitors will be able to experience where the work actually took place and where people lived. In the communities of Richland, WA and Oak Ridge, TN, hundreds of “Alphabet” houses built from the same blueprints have been home for families for over seven decades. At Los Alamos, visitors can walk down Bath-tub Row as well as see a cafeteria and dormitory from the Manhattan Project.

**Interpreting the Manhattan Project**

With the Manhattan Project National Historical Park, the National Park Service will interpret this history for international audiences.

The National Park Service deliberately does not adopt a “museum voice” that tells people what to think. Instead it prefers to challenge visitors to consider the complex realities of an event from different perspectives. Ideally, the Manhattan Project will prompt a thoughtful and open-ended dialogue about the atomic bomb in World War II and the continuing role of nuclear weapons in the world today. After 70 years, such an assessment is both timely and worthwhile.

In the coming year, the Atomic Heritage Foundation will work with the National Park Service, expert historians, museums and historical societies to explore creation of a national traveling exhibition. The Manhattan Project is a case study of how science and technology can change the course of world history, politics, economics, society and culture. How has the relationship between scientists and society changed since the Manhattan Project?

These are important issues for possible treatment in a national traveling exhibition. We look forward to working with those in the humanities, science and engineering, and in the world of creative interactive exhibits. The Manhattan Project may have happened 70 years ago but its legacy permeates our lives and the world today. Creating an effective means to engage today’s audiences will be a challenging but significant undertaking.
**MANHATTAN PROJECT SITES: PAST & PRESENT**

**HANFORD, WASHINGTON**

*Recent Updates*
On July 5, 2014, the Hanford Reach Interpretive Center celebrated its grand opening. An interpretive center for the Hanford Reach National Monument, the REACH is also a place to learn about Hanford’s multilayered history and a resource for the community. For the Manhattan Project National Historical Park, the museum could be a first stop for visitors interested in learning about the Manhattan Project. Gallery 2 is dedicated to the story of the Hanford Engineer Works. In the future, a new building will be dedicated to the Manhattan Project history.

**LOS ALAMOS, NEW MEXICO**

*Recent Updates*
The Los Alamos Historical Society (LAHS) celebrated raising $3.5 million towards their goal of $7 million. On January 27, 2015, 100 people from the community attended the “Now it Can Be Told” celebration in Fuller Lodge. The funds will go toward an endowment for future support of LAHS. The Los Alamos Historical Museum is also restoring the Hans Bethe House, which will house the Harold Agnew Cold War Museum, and revamping exhibits in the Los Alamos Historical Museum.

**OAK RIDGE, TENNESSEE**

*Recent Updates*
This May, visitors will once again be welcome at the Guest House in Oak Ridge. The building is being restored for use as an assisted living and retirement center with 64 apartments. Oak Ridge is also working on preliminary designs for the interpretive exhibits for the History Center, Equipment Building and Viewing Tower at the K-25 site. The overall plan is quite exciting and if funded, could make the K-25 site a significant attraction for visitors to the new Manhattan Project National Historical Park.
In June 2014 the Atomic Heritage Foundation launched a timely new website for prospective visitors to the Manhattan Project communities at AtomicHeritage.org.

With colorful photographs, an interactive timeline, extensive articles on Manhattan Project history, and profiles of hundreds of Manhattan Project veterans, the new website will be an excellent resource. One feature is the powerful new interpretive tool called “Ranger in Your Pocket” (see page 11 for more information).

One of the most popular features of the new website is the “Profiles” section with an extensive database of Manhattan Project veterans and their families. To the extent possible, each profile includes information about the person’s involvement in the project, a timeline of his or her life, and photographs. The profiles also link to the oral histories on AHF’s “Voices of the Manhattan Project” website.

Visitors can search by location and profile type such as Manhattan Project veteran, family member, scientist, spy, and more. Eventually AHF hopes to include 10,000 Manhattan Project veterans in the database, making it the most comprehensive list of Manhattan Project workers online.

One of the most exciting features of the new website is an “Atomic Timeline,” organized by different eras, which follows key discoveries and developments in nuclear history, World War II, and the Cold War. The website also features educational resources. Lesson plans and articles on the science and history of the Manhattan Project, the project sites, and the legacy of the bomb are well illustrated with photographs and references for additional research.

With a wealth of information, AHF’s website promises to become an important resource for learning about the history of the Manhattan Project, the people who worked on the world’s first atomic bomb, and reflecting upon its complex legacy for our lives today.
In 2014 the Atomic Heritage Foundation released never-before-heard audio interviews with top Manhattan Project military leaders and scientists, including General Leslie R. Groves, J. Robert Oppenheimer, and Hans Bethe on the “Voices of the Manhattan Project” website (ManhattanProjectVoices.org). The public can now listen to the voices of those whose atomic achievements changed the course of world history, politics, science and society.

The interviews provide novel insight into the minds of the men and women who built the world’s first atomic bombs. General Groves explained, “I knew it was an impossible task, but my feeling was that while I very much disliked the assignment, as long as that was my assignment, we were going to make it go. This is going to succeed, it’s got to succeed, and we’re going to make it succeed.” Oppenheimer recalled, “I was more worried about the campaign in Africa and the campaign in Russia when I went to New Mexico than I was about the Germans making a bomb. I thought they might very well be winning the war.”

Over half a million people worked on the Manhattan Project at top-secret sites around the country. Today, only a small fraction of Manhattan Project veterans are still alive, and most of the key scientists passed away decades ago. Fortunately, AHF has been able to acquire the collections of three enterprising authors who conducted interviews with some of the luminaries as early as the 1960s.

In 1965, Stephane Groueff interviewed dozens of Manhattan Project principals for his book, “The Manhattan Project,” the first comprehensive history of the project written for the general public. In 1985, journalist S. L. Sanger spent his sabbatical from the Seattle Post-Intelligencer travelling 11,000 miles to interview dozens of former Hanford workers. In the 1980s, Richard Rhodes recorded in-depth interviews for his nuclear history works.

The interviews cover a variety of topics, from the early days of the Manhattan Project to the debate over developing the hydrogen bomb during the Cold War. Groueff, Sanger, and Rhodes interviewed some of the world’s most prestigious scientists, engineers, and mathematicians, including Glenn Seaborg, Harold Urey, Emilio Segre, Eugene Wigner, and Leona Woods Marshall as well as important Manhattan Project military and civilian administrators such as James B. Conant, Dorothy McKibbin, Col. Franklin Matthias, and Col. Kenneth Nichols.

As of January 2015, we have uploaded nearly half of the Groueff, Sanger, and Rhodes Collections interviews to the “Voices of the Manhattan Project” website. We add more every week, and hope to have the project complete by December 2015.

AHF is grateful to the Boston University Howard Gotlib Archival Research Center, which houses the Groueff Collection, and to S. L. Sanger and Richard Rhodes for exclusive permission to include their collections of oral histories on AHF’s “Voices of the Manhattan Project” website.

AHF has also continued to interview Manhattan Project veterans and their families around the country. In 2014 we interviewed a dozen people, including Rose Bethe, widow of Hans Bethe; Vera Kistiakowsky, the daughter of George Kistiakowsky; Rosemary Lane, who was a nurse at Oak Ridge; and Manhattan Project expert Dr. David Kaiser, historian of science at MIT.
General Leslie Groves: Oppenheimer had a wide experience in theoretical physics and it showed in everything he said. I was appealed to by his great grasp of everything. Oppenheimer’s great mental capacity impressed me, I think, when he told me that he had learned Sanskrit just for the fun of it. The only way that we were alike was mentally in our ability to grasp things quickly. While his mental capacity was in other lines than mine, you might say, still we were equally astute.

J. Robert Oppenheimer: At my first meeting with Groves, I said, “This thing will never get on the rails unless there is a place where people can talk to each other and work together on the problems of the bomb. There has got to be a place where people are free to discuss what they know and what they do not know and to find out what they can.” And that made an impression on him.

George Kistiakowsky: I grew up in a family in which the question of civil rights, human freedom, was a very important one. I went to war work in 1940 because I had a very intense rejection of Hitler and fascism.

Glenn Seaborg: I had trouble getting recruits. I would write to a young fellow at a university. I couldn’t tell him what we were working on. I would write, “Just trust me. We’re working on something that’s more important than the discovery of electricity.”

Rose Bethe: One of the interesting things about Los Alamos is that none of the work that went on in the laboratory went home, and many of the women found this very difficult. Many of them didn’t know what the men were working on. I knew perfectly well what Hans was working on and agreed with him that we not talk about it. I know that it was very difficult for many women because the husbands had talked about their work and it had been a close relationship. We talked about the war, we talked about what the families were doing, all sort of things.

Emilio Segre: I asked and informed myself whether they were absolutely sure that the atmosphere wouldn’t catch fire [during the Trinity Test]. They assured me that they had done so, but they can always make a slip. That thing was pretty fearful. I can’t say that I started to calm down! I’m enough of a physicist to know that you calculate everything, and then something happens that you never dreamed of.

Edward Teller: I have been asked again and again whether I have regrets. Will you please excuse me, but this is one of the most idiotic questions. If you had the choice that something simply was in the long term unavoidable should be first done by the United States or by the Nazis or by the Soviets or by someone else, would you have regrets to make sure that we did it first?

For full interviews, please visit ManhattanProjectVoices.org.
Heritage tourists around the world are now able to tour Manhattan Project sites on a new website, “Ranger in Your Pocket” (RangerInYourPocket.org). The website features a series of online tours of Manhattan Project sites and themes, including Hanford’s B Reactor, life at Hanford, and Manhattan Project Innovations.

The “Ranger in Your Pocket” website allows visitors to take self-guided tours of Manhattan Project sites, such as the B Reactor in Hanford, based on a BYOD or “Bring Your Own Device” strategy. This technology-based tool represents a fundamental shift in engaging visitors by empowering them to use their personal smartphones or tablets to create their own tour experience. In anticipation of the Manhattan Project National Historical Park, officials at the National Park Service have enthusiastically embraced this new technology.

The B Reactor tour takes visitors through each major room in the reactor. Visitors can listen to Manhattan Project scientists and workers explaining how the reactor worked and the various components that were essential to its operation.

At the Control Room stop, Leona Woods Marshall describes the fateful start-up of the reactor. “You could see the water getting hot, going through the brown recorders, and hear it rushing in the tubes. You could see the control rods coming out and out and out. And then something happened. There wasn’t any reactivity. The reactor was dead, just plain dead! Everybody stood around and stared.” Well after midnight, Enrico Fermi drove while they headed back to Richland arguing about what went wrong.

Another stop focuses on General Leslie R. Groves. As his son Richard recalled, his father was “very, very competitive. He played games not to play games, but to win. You didn’t want to play a game with him, because you were probably going to lose. If you didn’t, he’d come back until he beat you.”

The Manhattan Project “Innovations” tour has over two dozen vignettes addressing the extraordinary scientific and engineering innovations that came out of the Manhattan Project and their legacy for today.

In “The Colloquium,” Manhattan Project veteran Ben Diven remembers how Laboratory Director J. Robert Oppenheimer inspired innovation through weekly colloquia in Los Alamos: “The colloquia were one of the most important things…Oppenheimer insisted that everything could be discussed there. The idea was to have various group leaders describe what the group was working on and what their main problems were, what they were having trouble with. And very frequently then it would turn out that somebody who had not associated with them at all would come up with an idea of something that would actually be important.”

AHF plans to develop a suite of Manhattan Project tours on the “Ranger in Your Pocket” website. One tour in the works will feature Hanford’s prewar history, the T Plant and 300 Area operations, and expand on life at Hanford during the Manhattan Project. Another will focus on Bathtub Row, Fuller Lodge and the former Technical Area in downtown Los Alamos, NM. A third will address espionage, focusing on spies who gave the Soviet Union closely guarded atomic secrets.
2014 was a good year for the Manhattan Project in popular culture. A new television show on the Manhattan Project, “Manhattan,” premiered on WGN America on Sunday, July 27 with much fanfare. The Daily Beast proclaimed that the “compelling new period drama” is “quite possibly the best new offering this summer.”

“Manhattan” takes place in Los Alamos, NM, opening in July 1943, “766 days before Hiroshima,” and throws the audience right into the show’s central tensions: Can they succeed in creating an atomic bomb that will help end the war? Are there spies in their midst? Scientists have to constantly remind each other of just how top-secret the project is, cover for the not-so-innocent indiscretions of their employees, and lie to their increasingly suspicious wives of the true nature of their work.

“Manhattan” hits all the right notes for a historical television drama: love and betrayal, secrecy and spies, and the incessant toll of war. Add in alcohol, the Army, and scientists suffering from nightmares, and Los Alamos becomes a powder keg.

The show focuses on the challenges the scientists face in developing a plutonium atomic bomb. One group is designing a “Thin Man” bomb - the same design the Little Boy gun-type bomb used, but with plutonium instead of uranium. The show’s protagonist, Frank Winter, works steadily on another bomb design - implosion. “Manhattan” focuses on Winter and his group as they struggle to master the science and engineering behind implosion and the new element, plutonium.

The show is a blend of fact and fiction. The primary characters are entirely fictional including the main scientist, Frank Winter, and a Chinese-American physicist, Sidney Liao. “Manhattan” does portray J. Robert Oppenheimer as the director of the laboratory at Los Alamos. Secretary of War Henry Stimson also shows up in the first season’s finale. The show has received wide acclaim for portraying strong female characters, from women scientists to independent wives.

Our staff live-tweeted historical information about the Manhattan Project during every episode, and wrote recaps of each episode on AHF’s website. The producers of “Manhattan” encouraged people to follow AHF on Twitter to learn more about the real history of the Manhattan Project.

It can be difficult for historical purists to watch a show like this, but we enjoyed the first season of “Manhattan.” It has helped introduce people around the country to the rich and complex history of the Manhattan Project and piqued their interest in the history. After the show launched, visits to AHF’s website and the “Voices of the Manhattan Project” website doubled. Our reviews of the show have proved especially popular.

We will continue to review and live-tweet the second season, which will premier in summer 2015. Next season should be even more dramatic as scientists race to complete and test an atomic bomb before Germany. Meanwhile, spies begin to pass information about the program to the outside world. Stay tuned!
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Thank you for your interest!

SOCIAL ME

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On YouTube: http://www.youtube.com/user/AtomicHeritage
SUPPORT & PRODUCTS

The Atomic Heritage Foundation Needs You!

The Atomic Heritage Foundation is working to preserve properties of the Manhattan Project, capture oral histories, and ensure that this history and its lessons for today are not forgotten. Please consider supporting our efforts and write a check to “Atomic Heritage Foundation” or donate online at AtomicHeritage.org. To find out more, call 202-293-0045. Thanks very much!

BOOKS & PUBLICATIONS

AHF has published a variety of books and educational resources on the Manhattan Project. All of these publications are available through our online store at AtomicHeritage.org and on Amazon.com.

- The Manhattan Project: The Birth of the Atomic Bomb in the Words of its Creators, Eyewitnesses, and Historians
- Remembering the Manhattan Project: Perspectives on the Making of the Atomic Bomb and its Legacy
- Oppenheimer and the Manhattan Project: Insights into J. Robert Oppenheimer, “Father of the Bomb”
- A Guide to the Manhattan Project in New Mexico
- A Guide to the Manhattan Project in Tennessee
- A Guide to the Manhattan Project in Washington State
- A Guide to the Manhattan Project in Manhattan

FILMS & MULTIMEDIA

AHF has also produced a number of documentary films and multimedia on the Manhattan Project. Products available on our online store include:

- The Uncommon Man: Crawford H. Greenewalt
- A Sense of Place: Preserving the Manhattan Project at Los Alamos
- Hanford’s Secret Wartime Mission
- General Leslie Groves
- Nuclear Pioneers: Creation of the Experimental Breeder Reactor-I
- Race for Atomic Power: The Story of the National Reactor Testing Station in Idaho Falls
- Interviews with Manhattan Project Veterans, Volumes I, II, and III

For more, check out our YouTube page online.