

ATOMIC HERITAGE FOUNDATION  
*Preserving & Interpreting Manhattan Project History & Legacy*

# PRESERVING HISTORY



ANNUAL REPORT 2013



## WHY WE SHOULD PRESERVE THE MANHATTAN PROJECT

“The factories and bombs that Manhattan Project scientists, engineers, and workers built were physical objects that depended for their operation on physics, chemistry, metallurgy, and other natural sciences, but their social reality - their meaning, if you will - was human, social, political.... We preserve what we value of the physical past because it specifically embodies our social past.... When we lose parts of our physical past, we lose parts of our common social past as well.”

“The new knowledge of nuclear energy has undoubtedly limited national sovereignty and scaled down the destructiveness of war. If that’s not a good enough reason to work for and contribute to the Manhattan Project’s historic preservation, what would be? It’s certainly good enough for me.”

~Richard Rhodes, “Why We Should Preserve the Manhattan Project,”  
*Bulletin of the Atomic Scientists*, May/June 2006

Photographs clockwise from top: J. Robert Oppenheimer, General Leslie R. Groves pinning an award on Enrico Fermi, Leona Woods Marshall, the Alpha Racetrack at the Y-12 Plant, and the Bethe House on Bathtub Row.

Front cover: A Bruggeman Ranch property.

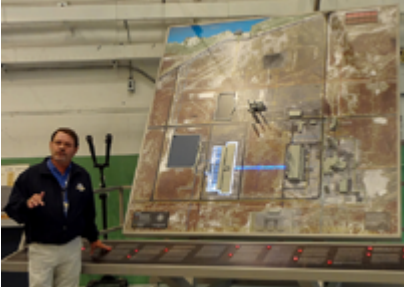
Back cover: Bronze statues by Susanne Vertel of J. Robert Oppenheimer and General Leslie Groves at Los Alamos.



# TABLE OF CONTENTS



**Cindy Kelly, Dorothy and Clay Perkins, and historian Nancy Bartlit at the Bethe House donation ceremony**



**B Reactor tour guide Russ Fabre with AHF's Columbia River model**



**Cindy Kelly with Manhattan Project veteran James Forde**



**Author Denise Kiernan with one of her "Girls of Atomic City" Rosemary Lane**

BOARD MEMBERS & ADVISORY COMMITTEE.....	3
LETTER FROM THE PRESIDENT.....	4
MANHATTAN PROJECT NAT'L HISTORICAL PARK.....	5
CRYSTAL TRUST AWARDS GRANT.....	6
MANHATTAN PROJECT SITES: PAST & PRESENT.....	7
MANHATTAN PROJECT WORKSHOP.....	8
VOICES OF THE MANHATTAN PROJECT.....	9
ORAL HISTORY EXCERPTS.....	10
MANHATTAN'S SECRET SITES.....	11
JOURNEY TO DESTINY.....	12
CONTACT AHF.....	13
SUPPORT & PRODUCTS.....	14



# ADVISORS & CONTRIBUTORS

## AHF BOARD MEMBERS

**Cynthia C. Kelly**, founder and president of the Atomic Heritage Foundation.

**Denise Kiernan**, journalist and producer. Author of bestselling *The Girls of Atomic City*, March 2013.

**Richard Rhodes**, Pulitzer Prize-winning author of *The Making of the Atomic Bomb* and 24 other books.

**John Wagoner**, former manager of the Hanford site for the Department of Energy, nuclear energy expert.

## MP VETERAN ADVISORS

**Lawrence Bartell**, Metallurgical Lab. Professor of chemistry emeritus at the University of Michigan.

**Benjamin Bederson**, Los Alamos, SED. Professor of physics emeritus at New York University.

**Colleen Black**, Oak Ridge. Former K-25 leak detector, later *Oak Ridger* journalist.

**Fay Cunningham**, MIT. Former director of chemical production at the Upjohn Company.

**Isabella Karle**, Metallurgical Lab. Physical chemist, former senior scientist at Naval Research Laboratory.

**Lawrence O'Rourke**, Manhattan and Oak Ridge, SED. Former president of Kawecki Berylco Industries.

**James Schoke**, Metallurgical Lab, SED. Pioneer in field of nucleonics, co-founded Nuclear Instrument and Chemical Corporation (1946) and others.

**Watson Warriner**, Hanford. Chemical engineer with DuPont (1939-1981) in chemical separations at Hanford and Savannah River Site; Plastics Dept. sales.

## AHF ADVISORY COMMITTEE

**Bruce Babbitt**, former Secretary of the U.S. Department of the Interior (1993-2001).

**Jeff Bingaman**, former Senator from New Mexico.

**Andrew Brown**, physician and author of *The Neutron and the Bomb* and *Keeper of the Nuclear Conscience: The Life and Work of Joseph Rotblat*.

**Jennet Conant**, author of *Tuxedo Park, 109 East Palace*, and other books.

**Pete Domenici**, former Senator from New Mexico.

**Michele Gerber**, consultant and author of *On the Home Front*.

**Gregg Herken**, professor of history at UC Merced and author of *Brotherhood of the Bomb*.

**William Lanouette**, retired GAO executive and author, *Genius in the Shadows: A Biography of Leo Szilard*.

**Arthur Molella**, director, Lemelson Center for Invention and Innovation at the Smithsonian Institution.

**Robert S. Norris**, senior fellow, Federation of American Scientists and author of *Racing for the Bomb*.

**A. R. Oppenheimer**, nuclear weapons expert and consultant on weapons of mass destruction.

**Hon. James R. Schlesinger**, former chairman of the Atomic Energy Commission.

**Michael L. Telson**, vice president for Energy and Electromagnetic Systems in Washington, DC for the General Atomics Corporation of San Diego, CA.

**Arnold Thackray**, president emeritus of the Chemical Heritage Foundation.

**Troy E. Wade**, former director of the Nevada Test Site and chairman of the National Atomic Testing Museum.

## RECENT CONTRIBUTIONS

The AHF would like to recognize the following who have generously contributed to our efforts in 2013:

Crystal Trust ◆◆◆◆

Carnegie Corporation of New York ◆◆◆

Institute of Electrical and Electronics Engineers ◆◆◆

The M. J. Murdock Charitable Foundation ◆◆◆

The National Science Foundation ◆◆◆

City of Richland ◆◆

Department of Energy ◆◆

The Institute of Museum and Library Services ◆◆

Joseph Wade Kennedy ◆

◆◆◆◆ \$250,000

◆◆◆ \$50,000 and up

◆◆ \$25,000 and up

◆ \$10,000 and up

# LETTER FROM THE PRESIDENT

Dear Friends:

In early 2013, we discovered an exciting treasure trove of Manhattan Project interviews in the Boston University archives. The collection has five hours of tapes of General Leslie Groves and interviews with over 80 top Manhattan Project scientists and engineers, including J. Robert Oppenheimer, Hans Bethe, Edward Teller, and Glenn Seaborg.

Thanks to a generous grant from the Crystal Trust, we will be able to make this and two other collections available on our “Voices of the Manhattan Project” website ([www.manhattanprojectvoices.org](http://www.manhattanprojectvoices.org)). Our goal is to make the website a robust repository for oral histories of the Manhattan Project. By the end of 2014, we could have over 500 on the “Voices” site.



Taking advantage of the oral histories, in 2014 we are launching a new “Ranger in Your Pocket” series. Tourists to the B Reactor or Bathtub Row in Los Alamos, for example, will be able to download on their cell phones or other mobile devices a “Ranger in Your Pocket” program to learn about these places.

Each program will have dozens of selections that lets visitors tailor their experience to suit their interests. They might listen to veterans describe the challenges of the work, the impact of secrecy, life in an “Alphabet” house, or their thoughts on the atomic bomb. One of the most famous women scientists, Leona Woods Marshall, makes her views clear: “I have no regrets. I think we did right, and we couldn’t have done it differently... When you are in a war, to the death, I don’t think you stand around and ask, ‘Is it right?’” Listening to many points of view, visitors will be stimulated to engage with others and draw their own conclusions.

In the last legislative days of December 2013, Congress just missed an opportunity to enact the Manhattan Project National Historical Park. Looking at 2014, the prospects of getting the park legislation are even better. Representative Doc Hastings has already committed to getting the legislation through the House again this year and the park’s champions in the Senate are eager to do the same.

The legislation will be the first recognition of the Manhattan Project in the national park system and one of the few national parks related to science and technology. The Manhattan Project offers a case study in the ambiguities of decision-making and complexities of history. Its legacy continues to influence national and world politics, economics and society in the 21st century.

The Atomic Heritage Foundation looks forward to another productive year of working to preserve a most inspiring, controversial and relevant history. Thanks to your continuing interest and support.

Sincerely,

A handwritten signature in cursive script that reads "Cynthia C. Kelly". The ink is dark and the signature is fluid and legible.

Cynthia C. Kelly  
President

# MANHATTAN PROJECT NATIONAL HISTORICAL PARK



We narrowly missed an opportunity in the closing days of Congress in December 2013 to have the Manhattan Project National Historical Park bill enacted as an amendment to the National Defense Authorization Act. The good news is that a similar strategy might work in 2014.

Everything started on June 14, 2013 when the House of Representatives voted to include the Manhattan Project National Historical Park Act as an amendment to the National Defense Authorization Act (NDAA), H.R. 1960. This is the “must pass” military authorization bill that provides funding for military employees, weapon systems and other national defense essentials. However, just before Thanksgiving, when the Senate began to take up the measure, there were over 500 amendments, many of them highly contentious, to consider.

With the Thanksgiving recess looming, the Senate adjourned and leaders came up with an alternative, fast-track strategy to ensure the military was not left in the lurch for the first time in over a half century. The leaders of the House and Senate Armed Services Committees negotiated a compromise bill acceptable to both Houses. In the process, the Manhattan Project National Historical Park Act amendment and hundreds of other amendments did not make it into the final version of the bill.

With strong bipartisan, bicameral support, we remain optimistic that Congress will manage to pass the bill this year. To quote Senator Martin Heinrich (D-NM), “It is not a matter of if, but when.” The bill has already made it through committees in the House and Senate, and its sponsors in both houses have vowed to see the bill pass and the park created.

Representative Doc Hastings, who has championed the bill in the House, issued a press release on December 11, saying, “I’m disappointed, but not deterred. To all the advocates for this park: You’ve given great energy, enthusiasm, and expertise to this effort to date, and I know that will continue until our goal is accomplished, which I am confident it will ultimately be.” Rep. Hastings promised to include to the bill in the 2015 NDAA that will be considered this year.



**Rep. Doc Hastings and Senator Martin Heinrich**

The Manhattan Project National Historical Park Act would establish a national historical park at Los Alamos, NM, Hanford, WA, and Oak Ridge, TN. Creating the park would ensure that these historic sites are preserved for future generations.

The Atomic Heritage Foundation has worked for over a decade to establish the park in partnership with Congress, the local communities, the National Parks Conservation Association, the National Trust for Historic Preservation, and the Energy Communities Alliance. We look forward to learning from the experience with the NDAA amendment and hope that this or another strategy will work in 2014.



# CRYSTAL TRUST AWARDS GRANT



Ernest Lawrence showing off his cyclotron to Glenn Seaborg and J. Robert Oppenheimer

Over the past decade, the Crystal Trust, a foundation in Wilmington, DE, has funded a documentary film, guidebook and other AHF initiatives. Nonetheless, we were surprised and delighted to receive a \$250,000 check just before Christmas. The latest grant will enable AHF to make some 180 Manhattan Project interviews available to the public and take additional interviews with Manhattan Project veterans and their families.

The Atomic Heritage Foundation will salvage three collections of Manhattan Project oral histories currently in academic and private archives: the Stephane Groueff collection at Boston University (1965), the S. L. Sanger collection at the University of Washington (1986) and Richard Rhodes' private collection (1990s). These recordings include over five hours with General Leslie R. Groves and hundreds more with over 180 other Manhattan Project participants.

The first collection is interviews taken by Stephane Groueff for *The Manhattan Project: The Untold Story of the Atomic Bomb* (1967). The collection includes interviews with luminaries such as General Leslie Groves, J. Robert Oppenheimer, and Nobel laureates Hans Bethe, Harold Urey, and Glenn Seaborg.

The second collection is 62 oral histories taken by S. L. Sanger in 1986 for his book, *Working on the Bomb: An Oral History of WWII Hanford* (1995). The collection

includes interviews with Col. Franklin T. Matthias of the Army Corps of Engineers, physicists Eugene Wigner and Leona Woods Marshall, and many top officials from DuPont, including Walter Simon, Crawford Greenewalt and Dale Babcock.



Crawford Greenewalt

The third collection consists of interviews taken by Richard Rhodes, author of the Pulitzer Prize-winning book, *The Making of the Atomic Bomb* (1987). In Rhodes' words, the collection is a "gold mine," including many of the top figures of the Manhattan Project such as Harold Agnew, Edward Teller, and George Kistiakowsky.

In 2014 we will digitize the tapes, transcribe and edit the interviews, and add them to the "Voices of the Manhattan Project" website. We also plan to use the interviews in museum exhibits, interpretive vignettes and other programs to bring the Manhattan Project history to life.

Soon you will be able to hear the voices of the Manhattan Project's General Groves, J. Robert Oppenheimer, and dozens of others. Many thanks to Crystal Trust!



General Leslie R. Groves

# MANHATTAN PROJECT SITES: PAST & PRESENT

## HANFORD, WASHINGTON

### *Recent Updates*

On October 5 and 6, 2013, the T Plant was open for public tours for the first time. The T Plant was used to chemically separate plutonium from the irradiated fuel rods, a crucial role in the plutonium production process. A first-of-a-kind facility, the T Plant is still used by the Department of Energy today for handling radioactive waste. Some of the historic artifacts from the T Plant may be put on display at the Hanford REACH Interpretative Center, to open in July 2014.



## LOS ALAMOS, NEW MEXICO

### *Recent Updates*

Clay and Dorothy Perkins have most generously provided \$530,000 to purchase and restore the Hans Bethe House on Bathtub Row. The house will be known as the Harold Agnew Cold War Museum. The Perkins were friends of the late Harold Agnew, a former Manhattan Project scientist and beloved LANL director (1970-1979). Thanks to them, the Los Alamos Historical Society will have a wonderful resource right next to the Oppenheimer House for interpreting the storied history of Los Alamos.



## OAK RIDGE, TENNESSEE

### *Recent Updates*

On December 17, the Department of Energy completed its demolition of the K-25 gaseous diffusion plant. The National Park Service urged preservation of a piece of the K-25 but instead DOE agreed to recreate a portion of the plant with exhibits nearby. Unfortunately, at this time there are no funds for this work. However, progress is being made to restore the historic Alexander Inn as a senior living center and to remember its role as the Guest House.





# MANHATTAN PROJECT WORKSHOP

On February 14-15, 2013, the Atomic Heritage Foundation hosted a workshop funded by the National Science Foundation, “Transforming the Relationship between Science and Society: Interpreting the Manhattan Project.” The workshop featured experts in the humanities and informal science learning, representatives from Manhattan Project museums, the National Park Service and Department of Energy.



AMSE Deputy Director Ken Mayes, author Andrew Brown, Cindy Kelly, and historian J. Samuel Walker at the workshop

The workshop considered recent scholarship about the Manhattan Project and issues of science and society raised by the development of the atomic bomb. The workshop’s goals were to advance interdisciplinary approaches and generate recommendations for the development of exhibits, programs and media about the Manhattan Project and its relevance to the 21st Century. The participants grappled with presenting issues raised by science in the context of history, society and culture.



Richard Rhodes at the workshop

Thanks to excellent presentations by the participants and the spirited discussions that ensued, we have a clearer idea of the issues that should be addressed. Presentations included analyses of successful exhibitions around the country; the scholarly debate among historians about the decision to drop the bomb; the moral responsibilities of scientists; the culture of secrecy and the Manhattan Project; and the Cold War.

We have uploaded video of all the presentations and some of the discussions to our YouTube page: *AHF Workshop: Interpreting the Manhattan Project*. We have also transcribed the entirety of the workshop and issued a report summarizing the discussions and the recommendations.

In an informal evening session, National Park Service (NPS) officials engaged participants in a discussion of the challenges of interpreting the controversial history of the Manhattan Project. Stephanie Toothman, NPS Associate Director for Cultural Resources, and Julia Washburn, NPS Associate Director for Interpretation and Education, talked about history as a dynamic, ongoing process of discovery, with no single “accurate” version. At the Manhattan Project sites, visitors will be provided with multiple perspectives and asked to draw their own conclusions.



AHF President Cindy Kelly with National Park Service officials Julia Washburn (left) & Stephanie Toothman (right)

The workshop was funded by the National Science Foundation’s Informal Science Education program in the Directorate for Education and Human Resources (EHR) and the Science, Technology and Society Program in the Directorate for Social, Behavioral and Economic Sciences (SBE).

The Atomic Heritage Foundation will be partnering with leading science and history museums to develop plans for a national traveling exhibit. The goal is to have an exhibition ready for the 75th anniversary of the Manhattan Project in 2017.

# VOICES OF THE MANHATTAN PROJECT



Women heading into work at the Y-12 plant in Oak Ridge.  
Photo by Ed Westcott.

In 2013, Atomic Heritage Foundation staff interviewed over 30 Manhattan Project veterans and families around the country. We traveled to Colorado, Maine, North Carolina, Washington, Arizona, Florida, Tennessee, and several other states for the interviews. Many of the people interviewed are well into their 90s.

The interviewees include a Nobel Prize winner, Roy Glauber; the daughter of General Leslie Groves, Gwen Groves Robinson; the only African-American to work on the Manhattan Project in the Nash Garage Building in New York, James Forde; and Peddy Bowditch, the daughter of William “Deak” Parsons, the Manhattan Project’s top ordnance officer.



Manhattan Project veteran Colleen Black (left)  
with Cindy Kelly in hat and Denise Kiernan

Most of the interviews conducted in the past year have been uploaded to our “Voices of the Manhattan Project” oral history website ([manhattanprojectvoices.org](http://manhattanprojectvoices.org)). The remaining interviews will be uploaded soon.

As of January 2014, we have over 140 interviews on the website, including a dozen from our partner, the Los Alamos Historical Society. Thanks to a generous grant from Crystal Trust (see page 12), we will soon be digitizing and adding hundreds of more interviews from three outstanding collections. We are also working through our backlog of interviews taken in the past twelve years. This year we uploaded a number of older interviews, including five interviews conducted by AHF in 2002. These oral histories include memorable accounts from Thomas O. Jones, Norman Brown, Harold Hasenfus, Ted Rockwell, and William Spindel.



Clockwise from top left: Bill Wilcox, Ted Rockwell,  
Harold Agnew, and Jerome Karle

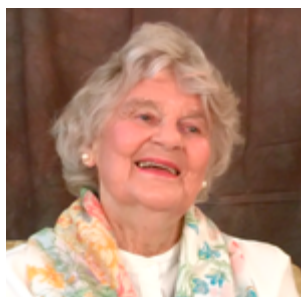
Unfortunately, we lost several of our good friends and Manhattan Project veteran advisors in 2013: Bill Wilcox, the city historian of Oak Ridge; Ted Rockwell, who served as Admiral Hyman Rickover’s technical advisor; Jerome Karle, who received the 1985 Nobel Prize in Chemistry; and Harold Agnew, who served as the director of the Los Alamos National Laboratory. We are grateful to have had the friendship of so many Manhattan Project luminaries. Interviews with Wilcox, Rockwell, and Agnew can be watched on the “Voices” website. Their voices live on.



# ORAL HISTORY EXCERPTS



**Anne McKusick:** When I got to Oak Ridge, it was perhaps not surprising that there were no girls who were physicists. I remember somebody saying to me once, “You consider that you’re a girl who happens to be a physicist, or a physicist who happens to be a girl?” Women weren’t thought to be capable of learning the subject.



**Priscilla McMillan:** Oppenheimer knew how to deal with types of people he had never dealt with before. There were many workmen on the project who did all kinds of things. He knew what all of them did. He could talk to them in their own language, take a totally commanding interest in what they were doing. He listened to them. He was a miraculous director in a way that no one who knew him earlier ever foresaw. It was probably the happiest time of his life.



**Thomas O. Jones:** A bomb test was just a few months away. I learned with dismay that this would be a major event with a very high TNT equivalent blast. My role in that situation was to see whether this bomb went “pfump” or whether it took half of the state of New Mexico into the air and perhaps into flights around the world. My role was to see that whatever happened, nobody noticed.



**William Spindel:** I knew David Greenglass at Los Alamos. He actually tried to get me to serve as a spy. The line then was, “Don’t you think it’s not fair not to share this with our great Russian allies? They’re fighting for us. Why aren’t we sharing this information?”



**Peggy Bowditch:** The thing that amused me was that my father, William “Deak” Parsons, armed the bomb in flight. And my father literally could not fix a leaking faucet. The irony of his doing that! My father planned for every possible, worst-case scenario. And everything went like clockwork, partly because of the planning, and partly because of luck.



**Gwen Groves Robinson:** After the war, when my father, General Leslie Groves, died, we received a flood of letters from soldiers and Marines and Naval officers, everybody who had been out in the Pacific, recounting what their situation was when the bomb went off and what a relief and how the families were rejoicing because this had been resolved, and they were going to live. The letters filled a laundry basket.



**Herb Depke:** The Richland schoolbus stopped about two blocks from my home. The first day, when I got off the bus I looked around and all of the houses were identical. I had no idea which one was mine. I guess I found my mama, because here I am. That was scary.



**Roy Glauber:** Robert Bacher said flat out, “You know, we are working for the bomb.” I was amazed at that because I had taken it for granted that we were going to be working on getting a chain reaction built. He dismissed that, saying that had already been done in late 1942, over a year earlier. That was a shock.

*For full interviews, visit [manhattanprojectvoices.org](http://manhattanprojectvoices.org).*



# MANHATTAN'S SECRET SITES

In 2013, the Atomic Heritage Foundation received a grant from the Carnegie Corporation of New York to highlight the role of New York in the Manhattan Project. Under this grant, AHF interviewed Manhattan Project veterans who worked in Manhattan, and collaborated with Carnegie staff on a Historypin website of key Manhattan Project sites in New York City. The website can be found at <http://perspectives.carnegie.org/mp/>.

Come take a tour of Oppenheimer's childhood home, Pupin Hall at Columbia, home of the cyclotron that produced the first fission in the United States, the headquarters of Union Carbide & Carbon corporation and much more. The information on the website is based on the Atomic Heritage Foundation's *Guide to the Manhattan Project in Manhattan*, part of AHF's Manhattan Project guidebook series.

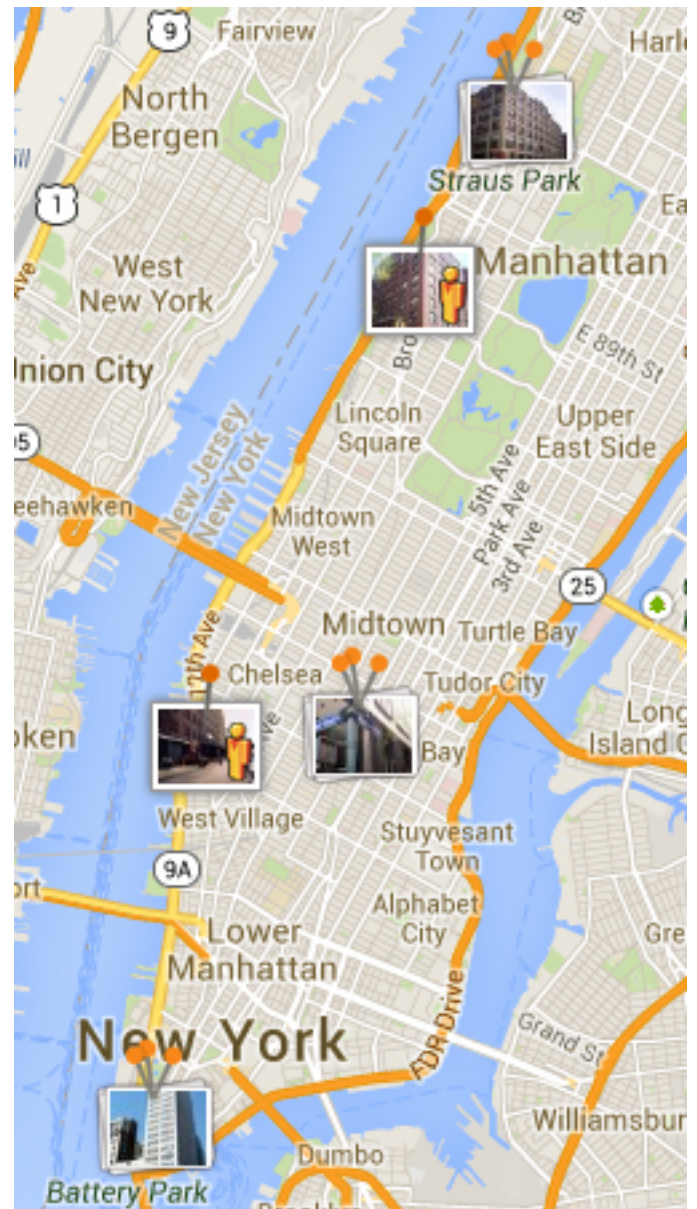


Visitors can learn where Enrico Fermi, Harold Urey, John Dunning and their colleagues at Columbia University worked on the science and technology behind the gaseous diffusion (K-25) plant at Oak Ridge. Also featured is the Woolworth Building where the Kellogg Corporation had its headquarters and physicist Klaus Fuchs began his espionage work for the Soviet Union.

The site promises to be a terrific online resource for students and the public to learn more about the top-secret history of the Manhattan Project and its many brilliant and colorful characters.

**Lawrence O'Rourke:** Our orders were to report to Columbia University and to do so in civilian clothes. I don't think any of us liked that. We were proud of our private first class rankings. But we did. We went home and packed a civilian suitcase and reported to Dr. Dunning at the Pupin Physic Labs at Columbia.

**James Forde:** I was hired by the Union Carbide and Carbide Company. They sent me to the Nash Garage Building on 132nd Street and Broadway. That was the Manhattan Project. At the time I was seventeen years old. I was a lab assistant. The main job that I had was cleaning these tubes in a sulfuric acid bath. I did not know what these tubes were, what they were for, or anything.



# JOURNEY TO DESTINY



All aboard! Warren and Betsy Dean, Darlene and Bob McLean, Cindy Kelly and Shepherd Warriner

On September 26, AHF President Cindy Kelly rode a “Journey to Destiny” train leaving Seattle for Pasco, WA. The trip was organized by Bob McLean of the American Association of Private Railroad Car Owners (AAPCO). With 29 private railcars, the train was bound for Crater Lake, Napa Valley and other destinations.

The trip to Pasco to visit the B Reactor was prompted by Watson C. Warriner, Sr., who helped build the chemical separation plants at Hanford. In 1995, the magazine “Trains” published an article by Watson about his “Journey to Destiny” in 1944 from Philadelphia to Pasco to begin his Manhattan Project work at Hanford.

For the special train trip, AHF created a pamphlet on the history of the B Reactor, Watson’s “Journey to Destiny” article and other material. To request a copy of the pamphlet, please contact AHF.

Trains were an important part of the smooth functioning of the Manhattan Project at Hanford. After irradiat-



ed fuel from the B Reactor had cooled off in the storage basin full of water for about 90 days, workers used twenty-foot long tongs to place the irradiated fuel into buckets.

To transport the fuel to the chemical separation plants, engineers designed special lead-lined cask cars. The fuel elements were loaded, under water, into a cask, which was sealed with a lid. A locomotive pulled the cask cars for their ten-mile journey to the three chemical separations plants, entering them through a railroad tunnel. Two 125-ton locomotives and two cask cars are on display at B Reactor. A bucket with fake slugs illustrates the once “hot” cargo.



Thanks to generous grants from Watson Warriner and Clay and Dorothy Perkins, the Atomic Heritage Foundation plans to repaint the lead locomotive to its original orange and black Hanford Engineer Works colors.

Missing builders plates will be replaced for both locomotives. Department of Energy restrictions on donations have delayed the painting, but once the Manhattan Project National Historical Park is established by Congress, the paint job should be possible.

AHF hopes to raise funds for interpretive panels to explain the role of the locomotives and cask cars on display. The panels can also inform visitors about the significant role of railroads at Hanford. Twenty-three steam locomotives provided heat for 50,000 workers at the Hanford construction camp in the early days of the project. Eventually, forty thousand freight cars delivered materials on 158 miles of new track.





## CONTACT AHF

*Come visit us at:*

**Atomic Heritage Foundation  
910 17th St. NW, Suite 408  
Washington, DC 20006**

Please call us at **(202) 293-0045**  
or email us at **info@atomicheritage.org**

*Thank you for your interest!*

## SOCIAL MEDIA

**Follow AHF on social media for daily updates!**

On Facebook:  
[http://www.facebook.com/  
AtomicHeritage](http://www.facebook.com/AtomicHeritage)

On Twitter:  
[https://twitter.com/  
AtomicHeritage](https://twitter.com/AtomicHeritage)

On YouTube:  
[http://www.youtube.com/  
user/AtomicHeritage](http://www.youtube.com/user/AtomicHeritage)





# SUPPORT AND 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. Most importantly, we are working towards a Manhattan Project National Historical Park. Please consider supporting our efforts and write a check to “Atomic Heritage Foundation” or donate online. To find out more, call 202-293-0045. Thanks very much!

### BOOKS AND 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 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*

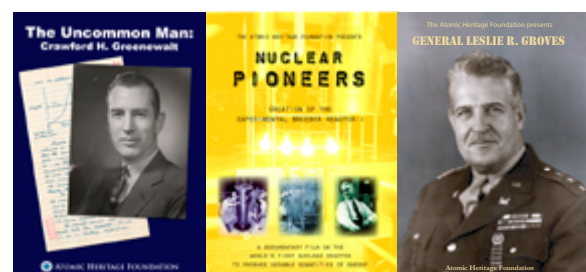


### FILMS AND MULTIMEDIA

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 the 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.





## ATOMIC HERITAGE FOUNDATION

910 17TH ST NW, SUITE 408 | WASHINGTON, DC 20006  
(202) 293-0045 | [INFO@ATOMICHERITAGE.ORG](mailto:INFO@ATOMICHERITAGE.ORG)  
[WWW.ATOMICHERITAGE.ORG](http://WWW.ATOMICHERITAGE.ORG)