## 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.



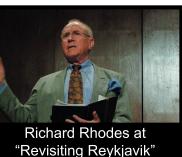
The B Reactor complex while in operation



Jay Wechsler



& Jim Petersen



Letter F SITES: PAS WENDOV REVISITIN AHF EVEN NEW MEX NATIONA A SALUTE WEBSITE PRODUCT



Ray Stein and Cindy Kelly at the WWII Memorial



Mick Wiest at the Alexander Inn, Oak Ridge

**ANNUAL REPORT 2009** 

"The Manhattan Project is in danger of becoming a metaphor. . . . Op-ed pieces now ask for a Manhattan Project for global warming, for energy self-sufficiency, for any large problem that requires a marshalling of enormous resources and collective will. Well, fine, let's marshal them. But let's also remember the Manhattan Project as a unique event, at a unique time."

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Joseph Kanon, author of *Los Alamos*, from October 6, 2006 symposium in Los Alamos, NM

## AHF BOARD MEMBERS

**Richard Rhodes**, Pulitzer Prize-winning author of *The Making of the Atomic Bomb, Dark Sun, Arsenals of Folly,* and over twenty other books.

- **John D. Wagoner**, former manager of the Department of Energy's Richland Operations Office (Hanford).
- **Cynthia C. Kelly**, founder and president of the Atomic Heritage Foundation, formerly a senior executive with the Department of Energy and Environmental Protection Agency with over twenty years of experience.

### AHF ADVISORY COMMITTEE

- **Bruce Babbitt**, former Secretary of the U.S. Department of the Interior (1993-2001).
- U.S. Senator Jeff Bingaman, NM.
- Andrew Brown, physician and author of *The Neutron and the Bomb* and *J. D. Bernal*.
- Jennet Conant, author of *Tuxedo Park* and 109 East Palace.

Former U.S. Senator Pete Domenici, NM.

Robert L. Ferguson, chairman and CEO of Nuvotec, Inc.

- **Robert W. Galvin**, founder and chairman emeritus of Motorola, Inc.
- **Michele Gerber**, former president, B Reactor Museum Association, author of *On the Home Front*.
- **Gregg Herken**, professor of history, UC Merced, and author of *Brotherhood of the Bomb*.
- **Robert S. Norris**, senior associate, Natural Resources Defense Council, author of *Racing for the Bomb*.
- **A. R. Oppenheimer**, nuclear weapons expert and consultant on weapons of mass destruction.
- Jerry L. Rogers, former National Park Service Associate Director. Hon. James R. Schlesinger, former chairman of the Atomic
- Energy Commission. **David J. Simon**, director, New Mexico State Parks Division, NM.

**Eugene B. Skolnikoff**, professor of political science emeritus, MIT.

Michael L. Telson, director, National Laboratory Affairs, University of California.

**Arnold Thackray**, president of the Chemical Heritage Foundation. **Troy E. Wade**, chairman of the Atomic Testing Museum, former

director of the Nevada Test Site.

U.S. Congressman Zach Wamp, Oak Ridge, TN.

## AHF MANHATTAN PROJECT VETERANS

Benjamin Bederson, professor of physics emeritus at New York University.
Isabella Karle, PhD in physical chemistry, senior scientist at Naval Research Laboratory.
Jerome Karle, Nobel laureate, chief scientist at Naval Research Laboratory.
Theodore Rockwell, PhD in physics, founder of MPR Associates, Inc.
Ernest B. Tremmel, B.S. in civil engineering, consultant to nuclear energy industry.
William Wilcox, Jr., former technical director, Union Carbide Nuclear Division, Oak Ridge, TN.

## **Recent Contributions**

The Atomic Heritage Foundation has benefited from the generosity of the following foundations, corporations, individuals, and government agencies:

<u>\$100,000 and up:</u> The MacArthur Foundation

<u>\$50,000 and up:</u> City of Oak Ridge, TN Crystal Trust

<u>\$25,000 and up:</u> Bechtel Jacobs Company National Nuclear Security Administration

<u>\$10,000 and up:</u> The Kerr Foundation Los Alamos National Bank Nuclear Threat Initiative

2009 ANNUAL REPORT Editing and Design: Sam Zeitlin Catherine Hollander

## Dear Friends:

The Atomic Heritage Foundation celebrates its seventh year with high expectations for progress in designating a Manhattan Project National Historical Park Site. In 2004, the Manhattan Project delegation passed legislation directing the National Park Service and Department of Energy to work together on a study to that end. We expect that final recommendations will be provided to Congress in 2010.

Instead of one site, a Manhattan Project National Historical Park could have three core sites at Los Alamos, NM, Oak Ridge, TN, and Hanford, WA. In addition, a number of affiliated areas could be created such as the Manhattan Project sites at Dayton, OH, the University of Chicago, University of California at Berkeley, Wendover Air Force Base in Utah, the Trinity Site at Alamogordo, NM, and Tinian Island. The National Park Service would play a leading role in interpreting the history and linking the sites through its exhibits, publications and website. We expect that the options for creating a National Historical Park Site and other alternatives will be available for public comment sometime in the fall of 2009.

Among our other goals is to develop a national traveling exhibition to complement the designation of a National Historical Park for the Manhattan Project in 2010. For the past several years, we have been recording oral histories so that the exhibition "Atomic Secrets: The Manhattan Project and Its Legacy" can tell the story using firsthand accounts of the participants. The exhibition should help visitors better understand the Manhattan Project and the continuing challenges of dealing with nuclear weapons today.

We are seeking a Save America's Treasures grant to restore two Manhattan Project properties at Los Alamos: the Gun Site and the J. Robert Oppenheimer house. Clay and Dorothy Perkins will match the Save America's Treasures grant for the Gun Site. The funds will enable the Los Alamos National Laboratory to restore the site where the ballistics and assembly for the Hiroshima bomb were designed and tested. The Oppenheimer house grant will be matched by the Los Alamos Historical Society and will make the home ready for the public. In the future, the house could be the "jewel in the crown" of a national historical park at Los Alamos.

The Atomic Heritage Foundation is concerned with the legacy of the Manhattan Project and nuclear issues in the post-Cold War world. On Saturday, March 14, 2009, our symposium, "Revisiting Reykjavik," convened historians and policymakers to examine the nuclear challenges of the 21st century. A staged reading of Richard Rhodes' new play, *Reykjavik*, dramatized the meeting between President Reagan and Soviet General Secretary Gorbachev in October 1986 and raised fundamental issues about nuclear weapons and world security.

The Atomic Heritage Foundation is committed to increasing public understanding of nuclear history and the challenges of achieving a world free of nuclear weapons. We are publishing a reader on the history behind today's nuclear challenges and developing various educational resources for teachers and the public.

Thank you for your interest in and support for the Atomic Heritage Foundation's continuing efforts.

Sincerely, cyninia c. Kelly

Cynthia C. Kelly President

ATOMIC HERITAGE FOUNDATION

### page 3

# LETTER FROM THE PRESIDENT



# MANHATTAN PROJECT SITES: PAST & FUTURE

## HANFORD, WASHINGTON

Hanford, WA, was selected as the location for plutonium production facilities in December 1942 and named "Site W." The half-million-acre site was isolated and had sufficient transportation links, water and energy for the massive undertaking. Construction crews arrived in the summer of 1943. The B Reactor initially went critical on September 27, 1944, and the first irradiated slugs were discharged on December 25, 1944. The plutonium produced at Hanford fueled the "Fat Man" bomb dropped on Nagasaki on August 9, 1945.

## LOS ALAMOS. NEW MEXICO

Los Alamos, NM, code-named "Site Y," was the top-secret scientific laboratory for the Manhattan Project. Isolated on a mesa north of Santa Fe, Nobel Prize winners collaborated with young scientists to harness nuclear fission and produce a weapon of enormous force. After the July 16, 1945, Trinity test in Alamogordo, NM, proved successful, the world's first atomic bombs were used to end the war against Japan on August 6 and 9, 1945.

## Oak Ridge, Tennessee

Oak Ridge, TN, was the first site selected by the government for the Manhattan Project at the end of 1942 and code-named "Site X," or the Clinton Engineer Works. Workers built huge facilities using three different techniques for separating the isotopes of uranium. The K-25 plant used the gaseous diffusion method, the Y-12 plant used the electromagnetic method based on pioneering work with cyclotrons at Berkeley, CA, and the S-50 plant used the thermal diffusion method. All three techniques eventually contributed to producing the enriched uranium for the first atomic bomb.

### **B** Reactor Open to the Public

In October 2007, the Atomic Heritage Foundation debuted new interpretive exhibits at the B Reactor. In March 2008, the Department of Energy took the reactor off the list of facilities to be "cocooned." This summer, the Department is offering regular public tours of the site which are proving to be extremely popular, attracting thousands of people.



### Plans to Restore the Gun Site

Building on the success of the award-winning V Site restoration (2006), the Atomic Heritage Foundation has received an extremely generous pledge from a private donor to fund restoration of the Gun Site. Clay and Dorothy Perkins will help restore the site where experiments to help design the Hiroshima bomb were conducted. While the Los Alamos National Laboratory has begun some preliminary work, the AHF is seeking a Save America's Treasures grant for the site's restoration to match the Perkins grant.

### K-25 Plant Too Risky to Save

The Department of Energy has decided that saving even a portion of the K-25 plant is too risky for workers and too costly for the public. Instead, the Department of Energy's Oak Ridge Operations is supportive of commemorating the mile-long gaseous diffusion plant with an interpretive center at the site. See story, page 12.



### ATOMIC HERITAGE FOUNDATION

# Wendover Hangar Listed Among America's 11 Most Endangered Historic Places

On April 28, 2009, the National Trust for Historic Pres- small-scale laboratory experiments. At Los Alamos, ervation named the Manhattan Project's Enola Gay scientists designed two types of bombs, "Fat Man" and hangar at Wendover Airfield one of America's 11 Most "Little Boy," that together brought an end to World War Endangered Historic Places. The hangar housed the II. Only a handful of properties remain to bear witness aking that changed the course

Enola Gay, the B-29 bomber that dropped the atomic bomb "Little Boy" on the city of Hiroshima. Wendover Airfield was one of the Manhattan Project Properties nominated by the Atomic Heritage Foundation for the award.

Located in Wendover, UT, Wendover Airfield was a training base for the Army Air Corps that played a major role in the Manhattan Project. Here, the 509th Composite Group trained for their top-secret mission to drop



The Enola Gay hangar at Wendover Airfield

the world's first atomic bombs on Japan. The repeated essentially been ruled out despite community support testing that took place at Wendover with over 155 pro- to save it. Further progress to preserve a handful of properties will depend upon continued Congressional totype weapons was essential for the success of the enand public support. tire project. However, the B-29 *Enola Gay* hangar and most of the other important World War II structures are in a critical state of disrepair. The site may require Having authorized a Manhattan Project National His-

\$5 million to \$6 million to restore it as a museum.

The National Trust for Historic Preservation's "America's 11 Most Endangered Properties" designation for the *Enola Gay* hangar highlights the critical need to preserve the properties of the Manhattan Project. Not only does the Enola Gay hangar tell the story of the 509th Composite Group, it also serves as a poster child for other significant Manhattan Project proper-



Weaponeer Dick Jeppson

ties across the nation where scientists and engineers harnessed the energy of the atom for the first time.

The National Trust's designation of the *Enola Gay* hangar is a valuable contribution to efforts at gain-The Manhattan Project sites encompass a vast array of ing greater public visibility for the Manhattan Project sites. We look forward to the day when the public can historic properties and cultural resources that chronicle the development of the world's first atomic bombs. visit Wendover as part of a Manhattan Project National The effort was epic in scope, with huge uranium en-Historical Park. richment facilities at Oak Ridge, TN, and plutonium production reactors at Hanford, WA, built based on

**ANNUAL REPORT 2009** 

In 2000, the Department of Energy recognized eight "Signature Facilities" of the Manhattan Project. Only the "V Site" at Los Alamos has been restored. While the B Reactor was recently spared dismantlement or "cocooning," its fate depends upon continued interest in preservation by the public. Saving a portion of the mile-long K-25 plant at Oak Ridge has

torical Park Study in 2004, Congress needs to fund the preservation of the key government properties. A small percentage of the billions allocated for demolition would restore these iconic facilities. With a potential Manhattan Project National Historical Park, a congressional allocation would go a long way towards preserving a part of this internationally significant heritage for future generations.

# **REVISITING REYKJAVIK:** NUCLEAR POLICY FOR THE NEW CENTURY

On Saturday, March 14, 2009, the Atomic Heritage Foundation hosted a day-long symposium at the Carnegie Institution for Science entitled "Revisiting Reykjavik: Nuclear Policy for the New Century." On October 11 and 12, 1986, President Ronald Reagan and Soviet General Secretary Mikhail Gorbachev met at Höfði



Höfði House

House in Reykjavik, Iceland, to discuss nuclear weapons issues. policy There, Reagan and Gorbachev nearly agreed to end the threat of nuclear weapons forever.

At the March symposium, historians and policymakers looked back at the missed opportunity for nuclear disarmament at

Reykjavik and forward to the nuclear challenges that confront the Obama administration. The centerpiece of the symposium was a reading of *Reykjavik*, a new play that dramatizes the 1986 summit written by Pulitzer Prize-winner Richard Rhodes. The symposium was funded by the MacArthur Foundation, National Nuclear Security Administration, and the Nuclear Threat Initiative.

AHF President Cynthia C. Kelly and Richard Meserve, head of the Carnegie Institution for Science, delivered the opening remarks. The symposium's first panel, "Nuclear Weapons: Perspectives from the Past," featured brief talks from four historians. Robert S. Norris, of the Natural Resources Defense Council, analyzed the growth of the American nuclear weapons stockpile. Andrew Brown, of the Belfer Center at Harvard's Kennedy School of Government, examined Truman's decision to use the atomic bomb against Japan. William Lanouette, author of Genius in the Shadows, a biography of Hungarian physicist Leo Szilard, discussed Szilard's role in pushing for responsible nuclear policy. Finally, James Herschberg, of the George Washington University, examined how the memory of Niels Bohr and J. Robert Oppenheimer shaped subsequent decisions about nuclear weapons.



From left: Robert S. Norris, Andrew Brown, William Lanouette, and James Herschberg

The second panel, entitled "Nuclear Proliferation and Arms Controls: Perils and Progress," featured Ambassador Thomas Graham, Jr., a longtime expert on nuclear diplomacy, and Thomas C. Reed, a former weapons designer and co-author of The Nuclear Express. Ambassador Graham stressed the importance of strengthening international treaties and institutions that prevent nuclear proliferation. Reed focused on



the need to understand nations' self-interested motives for acquiring nuclear arms.

In the final session before lunch, Secretary James R. Schlesinger drew attention to some of the obstacles to global nuclear disarmament and emphasized the importance of America's nuclear deterrent to our allies around the world. "Revisiting Reykjavik" was ex-



tremely successful, and the morning's events were broadcast in three parts on C-SPAN.

After lunch, excerpts from Reyk*javik*, a new play by Richard Rhodes, were presented by a cast directed by Norman Seltzer.

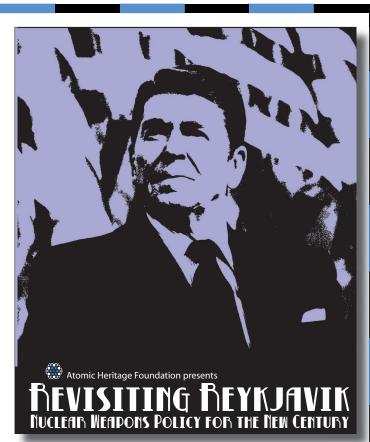
After the reading, Rhodes led a lively discussion about the play's themes and content. John Harvey of the National Nuclear Security Administration, Joseph Cirincione, president of the Ploughshares Fund, William Tobey of the Belfer Center, and Ambassador Graham discussed the unique challenges and opportunities for nuclear weapons policy in the 21st century.



The Atomic Heritage Foundation will follow up "Revisiting Reykjavik" with a book that provides perspectives on past and present efforts to achieve a world free of nuclear wepaons. The book will be published in 2010.

In addition, the Atomic Heritage Foundation is partnering with the Umbrella Hat Productions to stage a reading of *Reykjavik* on Tuesday, August 18, 2009 at El Museo Cultural de Santa Fe in Santa Fe, NM.

ATOMIC HERITAGE FOUNDATION

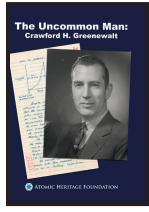


We are planning another staged reading of *Reykjavik* in Washington, DC, in late 2009 or early 2010. As President Barack Obama has embraced the goal of a "world without nuclear weapons," we expect that the play will

From left to right: Joseph Cirincione, Ambassador Thomas Graham, William Tobey, John Harvey, and Richard Rhodes

## AHF EVENTS ACROSS THE COUNTRY Remembering Crawford H. Greenewalt at the Hagley Museum

On Thursday, November 12, 2008, the Hagley Museum Harry Kamack and Watson Warriner, both of whom and Library in Wilmington, DE, hosted an inaugural showing of the Atomic Heritage Foundation's recently completed film, The Uncommon Man: Crawford H. Greenewalt. The film is a biography of the Manhat-



tan Project veteran and former DuPont president. Hagley warmly welcomed Cynthia C. Kelly, president of the Atomic Heritage Foundation, at a spenoon and a public event at the evening.

Many of the film's subjects were at the afternoon gathering including Irénée du Pont, brother-in-law to Crawford Greenewalt, Richard Heckert, former CEO of Du-Pont, and Nancy Greenewalt Frederick, Greenewalt's daughter. In addition, Manhattan Project veterans

### **AHF Honored by National Trust**

The National Trust for Historic Preservation honored the Atomic Heritage Foundation with a National Trust/ Advisory Council on Historic Preservation Award at their annual October convention in Tulsa, OK. A nonprofit dedicated to historic preservation in America, the National Trust has been working to protect historic sites and revitalize the communities around them since 1949. National Preservation Awards are given to recognize those "individuals and organizations whose contributions demonstrate excellence in historic preservation."

The award recognized the Atomic Heritage Foundation's work to preserve the "V Site" at Los Alamos, NM. The "V Site," where the prototype plutonium bomb used in the Trinity test was assembled, received a Save America's Treasures grant that enabled the AHF, along with local partners to preserve and restore this piece of America's history. Also being recognized by the National Trust for their roles in the preservation of the "V Site" are the Los Alamos National Laboratory, New Mexico State Historic Preservation Office, and Crocker Ltd., a Santa Fe architectural firm.

worked for DuPont, were there. Two other Manhattan Project veterans, C. K. Nicholson and Glen Barbaras, attended the evening event. Many remembered Crawford Greenewalt and commented on how well the film captured his accomplishments and personality.

Director Geoff Halfpenny Greenewalt made extraordinary contributions to science, industry and society. After graduating from MIT in 1922, he joined DuPont as a chemical engineer. During the Manhattan Project, he was the liaison becial showing of the film at the tween Enrico Fermi and the scientists at the Met Lab Hagley Library in the after- in Chicago and DuPont and oversaw the construction and operations at Hanford. After the war, Greenewalt Soda House auditorium in the became president of DuPont (1946–1962).

> Despite his demanding professional life, Greenewalt still found time to spend with his family and pursue a variety of hobbies, including the study of hummingbirds. At the time of his death in 1993, he had photographed more hummingbirds, and more different species of hummingbirds, than any man in history.

### "Doctor Atomic" Opera in New York

On Saturday, November 8, 2008, members and friends of the Atomic Heritage Foundation enjoyed a matinee performance of "Doctor Atomic" at the Metropolitan Opera in New York City.

Written by Peter Sellars and composed by John Adams, the opera is a powerful interpretation in words and music of the tensions-scientific, political, moral and ethical-that were felt by those who gave birth to the atomic bomb. Set in Los Alamos and Alamogordo, it focuses on the dramatic 24 hours before the Trinity test on July 16, 1945.



On the morning of the opera, the group learned more about "Doctor Atomic" and its history in a special seminar held at the City University of New York. AHF President Cynthia Kelly, Manhattan Project veterans Ted Rockwell and Ben Bederson, and David Pines, one of Oppenheimer's former students, spoke at the seminar.

# NEW MEXICO TEACHERS' WORKSHOP

From June 9-12, 2009, twenty five teachers attended A highlight of the day was a tour of the Los Alamos the first-ever teachers' workshop on the Manhattan National Laboratory's Technical Area 18 led by his-Project hosted by the Atomic Heritage Foundation at torian Ellen McGehee. The first-ever public tour in-St. John's College in Santa Fe, New Mexico. The event cluded the historic Pond Cabin and the lab where was sponsored by the Department of Energy's Office Manhattan Project scientist Louis Slotin received a of Environmental Management, National Nuclear fatal dose of radiation during a criticality demonstra-Security Administration, Kerr Foundation, Los Ala- tion in 1946. In the evening, teachers were treated to

mos County Council, Los Alamos National Bank, Los Alamos National Laboratory Foundation, and Albert I. Pierce Foundation.

The workshop focused on the Manhattan Project in New Mexico. The goal was to help teachers of-



Teachers attending the Manhattan Project in New Mexico workshop

Mexico.

Historians Ferenc Szasz and Jon Hunner described the race for the atomic bomb and life at Los Alamos Dr. Joseph Suina, the former governor of the Cochiti during the war. Science teacher Jay Shelton gave a Pueblo, provided additional insight into the relationprop-filled demonstration of the science behind the ship between the pueblos and the Manhattan Projbomb. Videos of the lectures will be available on the ect. Brandt Petrasek, from the Office of Environmen-

AHF website. The teachers also visited the recently opened New Mexico History Museum and took a walking tour of Santa Fe historical sites.

On Thursday, the teachers visited the San Ildefonso Pueblo and met with Governor Leon Roybal. In Los Alamos, the teachers spent two hours at the Bradbury Science Museum. They especially enjoyed hearing Manhattan Project veterans George Cowan and Jay Wechsler speak at the historic Fuller Lodge. The Los Alamos Historical Society (LAHS) provided tours of the J. Robert Oppenheimer house as well as other Manhattan Project sites and the LAHS museum.



Professor Jon Hunner gives a walking tour of Santa Fe historic sites

an excellent dinner at the Central Avenue Grill by the Los Alamos County Council.

On Friday, teachers were exposed to multiple perspectives on the Manhattan Project and its legacy. John Fleck of the *Albuquerque* 

fer students a stimulating educational experience and *Journal* provided a reporter's perspective on coverinsight into how the Manhattan Project shaped New ing the lab, and Greg Mello of the Los Alamos Study Group discussed nuclear weapons opposition in New Mexico.

tal Management at DOE, and Los Alamos NNSA site officer Don Ami shared a federal perspective.

The workshop concluded as the teachers received honoraria and compensation for their travel expenses. The teachers are also eligible to receive graduate credit from the University of New Mexico.

The teachers' evaluations were full of superlatives. One wrote, "I've been attending educational workshops for 10 years, and this is by far the best I have ever attended." The Atomic Heritage Foundation will offer the workshop again in June 2010 and 2011, assuming funding is available.

# NATIONAL TRAVELING EXHIBITION

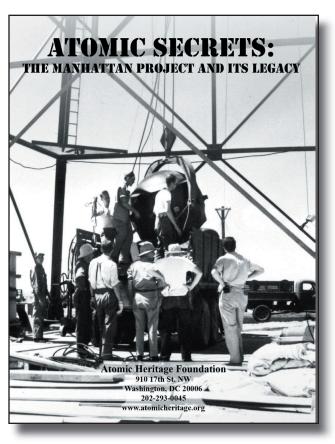
The Atomic Heritage Foundation is developing a national traveling exhibition about the Manhattan Project entitled "Atomic Secrets: The Manhattan Project and Its Legacy." The traveling exhibition will be the first of its kind, dealing comprehensively with the Manhattan Project and the continuing challenges of dealing with nuclear promises and threats today. The AHF is seeking funding for the exhibit from government, corporations, foundations, and other sources.

"Atomic Secrets" will make extensive use of firsthand accounts from Manhattan Project veterans and historians, public policy leaders, and other experts. The exhibition will explore the decisions to develop and use the atomic bomb in World War II. With this background, it will turn to the Cold War and current nuclear weapons issues. The historic meeting betwen Soviet General Secretary Mikhail Gorbachev and U.S. President Ronald Reagan in Reykjavik, Iceland, in 1986 will be brought to life through documentary footage. Interviews with President Barack Obama and other world leaders will provide perspectives on the prospects for realizing the goal of eliminating nuclear weapons.

"Atomic Secrets" will also include an interactive website component that offers Internet users a virtual tour of the exhibit. Developed to engage audiences with varying levels of knowledge about the subject, the "Atomic Secrets" exhibit and its website will serve as a comprehensive and accessible education-







al resource on the Manhattan Project and its legacy. Over a dozen museums have expressed interest in hosting the exhibition. Depending upon funding, we hope to launch the exhibit in 2012.

### **Preliminary List of Exhibition Venues:**

- \* Washington, DC
- \* National World War II Museum, New Orleans, LA
- \* American Museum of Science and Energy, Oak Ridge, TN
- \* Atlanta History Center, Atlanta, GA
- \* Museum of Aviation, Warner Robins, GA
- \* National Atomic Museum, Albuquerque, NM
- \* Los Alamos Historical Museum, Los Alamos, NM
- \* Atomic Testing Museum, Las Vegas, NV
- \* REACH Museum, Kennewick, WA
- \* Chicago Historical Society Museum, Chicago, IL
- \* Evansville Museum, Evansville, IN
- \* East Tennessee Historical Society, Knoxville, TN
- \* Hagley Museum, Wilmington, DE

On May 5, 2009, the U.S. Department of Energy The North End represents about six percent of the (DOE) took a major step towards demolishing the Kenormous facility. In November 2007, the Department of Energy asked the Oak Ridge Site-Specific Advisory 25 gaseous diffusion plant at Oak Ridge, TN. Board to determine whether the Oak Ridge commu-Listed as one of the eight Signature Facilities of the nity was in favor of preserving the North End.

Manhattan Project by DOE, the K-25 plant played an important role in World War II. Working with other Oak Ridge facilities, it enriched the uranium for "Little Boy," the gun-type bomb dropped on Hiroshima on August 6, 1945.

During the Cold War, the K-25 plant was a major producer of fuel for the U.S. nuclear weapons stockpile as well as a model for other plants around the nation. Two-thirds of the responses to a survey in *The Oak* The mile-long plant was the largest building under *Ridger* were in favor of preservation. In addition, the one roof in the world at the time of its construction. A Oak Ridge Site-Specific Advisory Board voted 12 to 1 massive electrical plant on-site was needed to provide in support of preservation of the North End. it with ample power.

The K-25 plant is comprised of fifty-four connected modular buildings, each of which has the same basic engineering, architecture, and machinery. The enrichment process was called a "cascade" as a hightemperature gas (uranium hexafluoride) was forced through millions of miles of pipes that ran through the plant. A still-classified barrier material containing millions of tiny pores was used to separate the fissile U-235 isotopes from the slightly larger, inert U-238 isotopes.

For more than five years, the Atomic Heritage Foundation worked closely with the Partnership for K-25



Bill WIIcox led efforts to preserve K-25's history.

Preservation (PKP) founded by Manhattan Project veteran Bill Wilcox to preserve a portion of the historic plant. In March 2005, the North End of the K-25 plant was set aside for preservation under a Memorandum of Agreement signed by State and Federal agencies and the City of Oak Ridge.

# A SALUTE TO K-25

At a public meeting on February 19, 2008, resolutions were presented by the Oak Ridge City Council, Oak Ridge Convention and Visitors Bureau, Oak Ridge Heritage and Preservation Association, and the East Tennessee Development Council calling for preservation of the North End of K-25.



Despite this support for preservation, on May 5, 2009, the Department of Energy explained that high cost estimates and concerns that workers would face

unknown safety risks persuaded them that the North End should be demolished. However, the nearly two million square foot (44-acre) footprint of the original K-25 plant will be marked and an interpretive center will be built at the site.

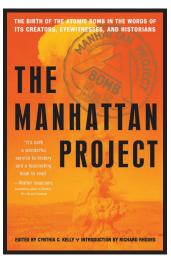
Designed by PKP working with Bechtel Jacobs Company LLC, the visitors' center will display some of the plant's original gaseous diffusion equipment. Moreover, it will use oral histories and documentary photographs to tell the story of the men and women who built and operated the historic plant.

The Atomic Heritage Foundation regrets the loss of the K-25 plant, an icon of the Manhattan Project and Cold War. However, preserving the footprint and creating an interpretive center are valuable means of conveying the K-25 plant to future generations.

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# The Manhattan Project In Softcover

On February 10, 2009, Black Dog & Leventhal released a paperback edition of the Atomic Heritage Foundation's critically acclaimed anthology *The Manhattan Project: The Birth of the Atomic Bomb* 



in the Words of its Creators, Eyewitnesses, and Historians.

Edited by Cynthia C. Kelly and introduced by Richard Rhodes, the book is a comprehensive anthology on the history of the Manhattan Project and the early Cold War years, and their legacy today, as told through historic documents, firsthand accounts and reflections.

"The single indispensable guide to the Manhattan Project. . . .The combination of perspectives from scientists, historians, and politicians across the decades makes this required reading for the educated citizen in our atomic world."

- Michael Gordin, Professor, Princeton University

# VISIT OUR WEBSITE

Visit the Atomic Heritage Foundation website to learn about Foundation news and events, find related links and veterans listings, participate in a members' forum, and access a large collection of photographs. The AHF posts news about Manhattan Project history and recent developments, and features stories along with a calendar of historical and current events.

To supplement our New Mexico Manhattan Project teachers' professional development workshop, we have added a wiki to our website that enables teachers to exchange lesson plans and source materials. Check it out at www. atomicheritage.org/wiki

The Atomic Storefront is the easiest and fastest way to purchase Atomic Heritage Foundation products. See page 14 for an inventory. You may also sign up for our newsletter on the website. PAGE 13

### The Atomic Heritage Foundation's latest publication was released on October 10, 2008. *A Guide to Manhattan Project Sites in Manhattan* takes readers on a tour of New York City's nuclear history—a history long hidden behind unassuming facades. Based on the re-

A GUIDE TO MANHATTAN

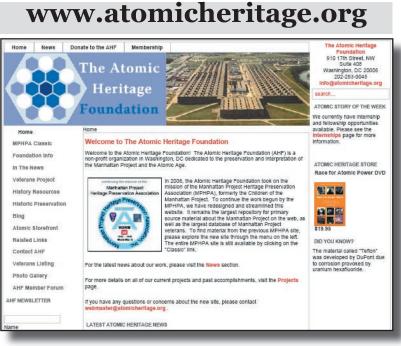
PROJECT SITES IN

MANHATTAN

ing facades. Based on the research of historian and longtime AHF adviser Robert S. Norris, the book is an authoritative resource and a readable guide to a side of New York that most people never see.

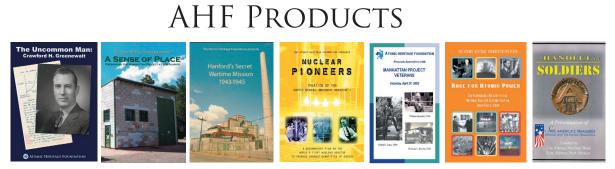
The phrase "Manhattan Project" was more than just a code name. It referred to the first offices of the American nuclear

effort located at 270 Broadway. Nor was the Broadway site the only tendril of the Manhattan Project in Manhattan. In engineering offices and industrial laboratories, hundreds of New Yorkers worked on the bomb without ever knowing what it was they were constructing. From the childhood home of J. Robert Oppenheimer to a Buddhist statue that survived the bombing of Hiroshima, these sites span the course of the war and beyond.



ATOMIC HERITAGE FOUNDATION

## Films



**The Uncommon Man: Crawford H. Greenewalt.** This documentary tells the story of the uncommon life of Manhattan Project contributor and DuPont head Crawford Greenewalt.

A Sense of Place: Preserving the Manhattan Project at Los Alamos. This documentary film examines the physical legacy of the Manhattan Project at Los Alamos.

**Hanford's Secret Wartime Mission.** This documentary film chronicles the story of the Manhattan Project at Hanford, where the world's first plutonium production facilities were built along the Columbia River in Eastern Washington State.

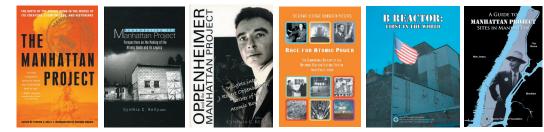
**Nuclear Pioneers.** This 28-minute documentary film about the Experimental Breeder Reactor-I (EBR-I) tells the story of the first nuclear reactor built by the Atomic Energy Commission.

Interviews With Manhattan Project Veterans, Volumes I, II, III. These two-hour videos are collections of interviews with Manhattan Project veterans.

**Race for Atomic Power.** This documentary film traces the history of the National Reactor Testing Station in Idaho Falls where 52 experimental reactors were built in 20 years.

A Handful of Soldiers. This short 11-minute film features three Manhattan Project veterans who describe their experiences at Los Alamos working on the plutonium-based bomb.

Books



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 Atomic Bomb."
Race for Atomic Power: The Remarkable History of the National Reactor Testing Station, Idaho Falls, Idaho.

The B Reactor: First in the World.

A Guide to Manhattan Project Sites In Manhattan: A tour of New York City's secret nuclear history.

# Membership and Support

The Atomic Heritage Foundation is working to preserve the key properties associated with the Manhattan Project, capture its oral histories, and ensure that this important history and its lessons for today are not forgotten.

Becoming a member is an easy way to support our work. Just go to www.atomicheritage.org and submit your membership application online or simply provide a donation. Your contribution will be tax exempt and much appreciated.



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