Production of Polonium

Dayton, Ohio

In Dayton, scientists used newly-developed refinement techniques to produce sufficient quantities of polonium, a radioactive element essential for the detonation of bomb trigger devices, for use by the Manhattan Project.

The results of the Manhattan Project transformed the world of science and technology and ultimately ushered in not only the atomic age but also the modern information age.

The National Park Service has been directed by Congress to conduct a special resource study for four of the Manhattan Project sites. The study will include evaluation of the significance of the sites as well as evaluations of the suitability and feasibility of designating one or more sites as units of the National Park System. As part of the study a range of alternatives will be developed which examine various means of ensuring long term preservation and public appreciation of theses sites. The study will result in final recommendations to Congress concerning the future preservation of the sites and opportunities for public understanding.

This special resource study will focus on four sites; Los Alamos National Laboratory and townsite in New Mexico, The Hanford site in Washington, the Oak Ridge Reservation site in Tennessee, and sites in Dayton, Ohio.

We will be holding public meetings to listen to your ideas about the type of involvement the National Park Service should have at these sites. Communication and cooperation with other government agencies, the local communities and the public will identify common interests and goals for these sites. We will keep you informed throughout the planning process with web site postings and newsletters.

Carla McConnell
Project Manager
National Park Service • Denver Service Center
carla_mcconnell@nps.gov

The Manhattan Project was a top-secret program implemented during World War II designed to win the race against Nazi Germany in the construction of the first nuclear bomb. Operating from December, 1942, the Manhattan Project was a $2.2 billion dollar effort that employed 130,000 workers at its peak, but was kept largely secret and out of public view.

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The Manhattan Project Sites Special Resources Study Locations

Chemical Separations Building (T Plant)
Hanford, Washington
Separated Plutonium out of irradiated fuel rods from Hanford reactors. Canyon-like structure 800 feet long, 65 feet wide, and 80 feet high nicknamed Queen Mary.

B-Reactor
Hanford, Washington
World’s first large-scale plutonium production reactor. Produced plutonium for Trinity device, the Nagasaki weapon (Fat Man), and Cold War weapons.

V - Site Assembly/Gun Site
Los Alamos, New Mexico
Trinity device (prototype for Nagasaki plutonium weapon) and later weapons assembly at V-Site. Ordnance for uranium gun type Hiroshima weapon tested at Gun Site.

X-10 Graphite Reactor
Oak Ridge, Tennessee
Produced first significant amounts of plutonium.

Production of Polonium
Dayton, Ohio
In Dayton, scientists used newly-developed refinement techniques to produce sufficient quantities of polonium, a radioactive element essential for the detonation of bomb trigger devices, for use by the Manhattan Project.

K-25 Gaseous Diffusion Process Building
Oak Ridge, Tennessee
Largest building in the world at the time; Demonstrated viability of gaseous diffusion for uranium enrichment.

V-12 Beta-3 Racetrack
Oak Ridge, Tennessee
Produced enriched uranium for Hiroshima weapon (Little Boy) utilizing E.O. Lawrence’s electromagnetic method.
**Schedule**

<table>
<thead>
<tr>
<th>Planning Activity</th>
<th>Dates</th>
<th>Public Involvement Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Set the stage for planning (we are at this stage): Listen to ideas, determine issues and concerns</td>
<td>Spring 2006</td>
<td>The public is invited to attend meetings and offer ideas using the options described in the box to the right</td>
</tr>
<tr>
<td>2 Develop Preliminary Alternatives: Identify a range of reasonable alternatives for NPS involvement, assess their effects, analyze public reactions, and select a preferred alternative</td>
<td>Summer 2006 to Spring 2007</td>
<td>Provide comments on the initial alternatives by using a response form. Attend public meetings and provide comments</td>
</tr>
<tr>
<td>3 Prepare and publish Draft Special Resource Study/Environmental Evaluation: Prepare draft describing the management alternatives, and impacts; distribute to the public</td>
<td>Summer 2007 to Spring 2008</td>
<td>Provide written comments on the draft document. Attend public meetings and provide comments</td>
</tr>
<tr>
<td>4 Revise and publish Special Resource Study/Environmental Evaluation: Analyze comments, revise draft document, distribute to Congress and the public</td>
<td>Fall 2008 to Spring 2009</td>
<td></td>
</tr>
</tbody>
</table>

**How to be Involved**

You can provide feedback by completing the enclosed comment form. Please let us know your thoughts and concerns regarding the issues and opportunities that each site presents. Also, let us know if you would like to be included on the project mailing list. After you have completed the postage-paid form, just fold and tape it and drop it in a mailbox.

All newsletters and project documents will be posted on the National Park Service planning web site, along with a response form if you prefer to participate electronically. You can follow the steps below to view project documents and submit your comments electronically:

1) Log on to [http://parkplanning.nps.gov](http://parkplanning.nps.gov)
2) Click the Plans/Docs link located at the top of the page
3) Check the box for Only Plans/Documents Open for Public Comment
4) Under the Project Type pull down menu, select Special Resource Study/New Study Area
5) Click the Show Plans/Documents button
6) Click on the Manhattan Project Sites Special Resources Study link

**Public Meetings**

The National Park Service planning teams will be holding public open houses. We welcome your comments and suggestions and hope to see you at one of the meetings listed below.

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Coordinator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday, March 22, 2006</td>
<td>Red Lion Richland Hanford House Richland, Washington</td>
<td>Stephanie Toothman</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:stephanie_toothman@nps.gov">stephanie_toothman@nps.gov</a></td>
</tr>
<tr>
<td>Tuesday April 11, 2006</td>
<td>U.S. Department of Energy Information Center Oak Ridge, Tennessee</td>
<td>Amy Fitzgerald</td>
</tr>
<tr>
<td>April 12, 2006</td>
<td></td>
<td>865-425-3554</td>
</tr>
<tr>
<td>Wednesday, May 24, 2006</td>
<td>St John’s United Church of Christ, Dayton, OH 45402.</td>
<td>Ann Honious</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:ann_honious@nps.gov">ann_honious@nps.gov</a></td>
</tr>
<tr>
<td>Wednesday, June 7, 2006</td>
<td>Fuller Lodge 2132 Central Avenue Los Alamos, NM 87544</td>
<td>Jennifer Carpenter</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:jennifer_carpenter@nps.gov">jennifer_carpenter@nps.gov</a></td>
</tr>
<tr>
<td>Thursday, June 8, 2006</td>
<td>Genoveva Chavez Community Center Community Room 3221 Rodeo Road Santa Fe, NM 87505</td>
<td>Jennifer Carpenter</td>
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<td><a href="mailto:jennifer_carpenter@nps.gov">jennifer_carpenter@nps.gov</a></td>
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