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JUN 18 2001



EDMC

Engineering Evaluation/Cost Analysis

Proposed Cleanup Plan for Hanford's B Reactor Facility

U.S. Department of Energy • U.S. Environmental Protection Agency • Washington State Department of Ecology

REQUEST FOR PUBLIC COMMENT

The U.S. Environmental Protection Agency and the U.S. Department of Energy-Richland Operations Office (DOE-RL) invite the public to comment on a cleanup plan for the B Reactor Facility. The plan evaluates alternatives for a 10-year interim removal action at the B Reactor Facility located in the 100 Area on the Hanford Site. Although DOE-RL has stated that the B Reactor Facility will be preserved, final long-term use of the facility has not yet been determined. The cleanup action described in this plan will only encompass a 10-year interim period and include actions that will not preclude future decisions on long-term use of the facility.

Public comments will be accepted from June 18 through July 17, 2001 on the *Engineering Evaluation/Cost Analysis for the 105-B Reactor Facility* (DOE/RL-2001-09, Rev. 0) document. A public meeting will be held on June 26, 2001 from 7:00 - 9:00 p.m. at the Richland Public Library (Doris Roberts Gallery), 955 Northgate Drive, Richland, Washington. If you would like to review the document, please visit one of the information repositories listed in this fact sheet or our web site at:

www.bhi-erc.com/projects/s_m/b_reader.htm *reactor*

To request copies of the document, or to submit comments in a written or electronic format, please contact:

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All public comments will be considered before a final cleanup alternative for the B Reactor Facility is selected. The decision will be documented in an Action Memorandum, which is a *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) document.

Background

Construction of the B Reactor Facility began in 1943 as a part of the Manhattan Project effort to bring an end to World War II. The B Reactor Facility was the world's first full-scale production reactor and was credited with having produced plutonium fuel for the world's first nuclear device. The facility also produced the plutonium fuel used in the atomic bomb and tritium for the first hydrogen bomb. The B Reactor

Facility remained in operation until final shutdown in 1968. For 12 years following the shutdown order the B Reactor Facility was held in standby status. The facility was finally declared excess property in the early 1980s and has been preserved for its historical and interpretational value since that time.

The historical significance of the B Reactor Facility has led to numerous declarations, including National Historic Mechanical Engineering Landmark and the Nuclear Historic Landmark Award. The B Reactor Facility has also been listed in the National Register of Historic Places and was designated a National Civil Engineering Landmark in 1993. Since the late 1980s, guided tours have been conducted through portions of the B Reactor Facility. Interpretive items and historical displays are exhibited in the facility along the current tour route.

In recognition of the need to preserve the physical legacy of the Manhattan Project, DOE-RL has nominated the B Reactor Facility for inclusion in the National Register of Historic Places in accordance with the opinion of the Washington State Historic Preservation Officer and the provisions of 36 CFR part 800, "Protection of Historic and Cultural Properties." On April 3, 1992, the National Park Service entered the B Reactor Facility in the National Register. Specific actions to mitigate the cumulative impacts of decommissioning on the historic preservation of B Reactor Facility will be determined later in accordance with 36 CFR part 800. Actions to preserve this historic resource may include extensive recordation photographs, drawings, models, exhibits and written histories, and may also include preservation of some portions of the B Reactor Facility or display on or near its present location, or at some other selected location.

What cleanup actions were evaluated?

In addition to the preferred cleanup action, the two alternatives summarized below were also evaluated in this engineering evaluation/cost analysis. Because of the inability of these alternatives to preserve the historical and interpretational value of the facility, they were not considered desirable as the preferred cleanup action alternative.

- **No Action Alternative:** With the no action alternative, Hanford site institutional controls, such as fences and posted signs, would be maintained to help prevent personnel or worker entry to the contaminated facility. No other specific controls would be established for the facility covered by this engineering evaluation/cost analysis. Because the facility would not be decontaminated, and no action would be taken to stop the facility from deteriorating, there is likelihood that a release would eventually occur, potentially exposing site workers, the public, and the environment to hazardous substances. Because of the minimal intervention involved in this action, there is no cost associated with this alternative.
- **Surveillance and Maintenance Alternative:** The goal of the surveillance and maintenance alternative would be to sustain the facility in a minimum safe condition for a 10-year period. To the extent possible, surveillance and maintenance

would be performed to minimize the potential for an environmental release and protect the workers while maintaining compliance with standards in State and Federal regulations and DOE orders. However, contamination would remain in place and the facility would not be available for public access or historical interpretation. The estimated cost of the surveillance and maintenance alternative is approximately \$1.5 million.

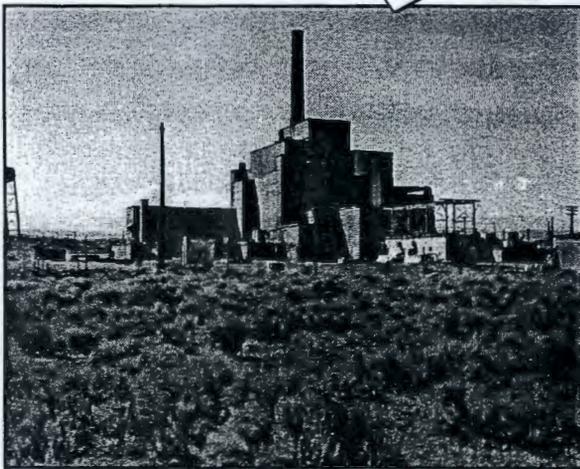
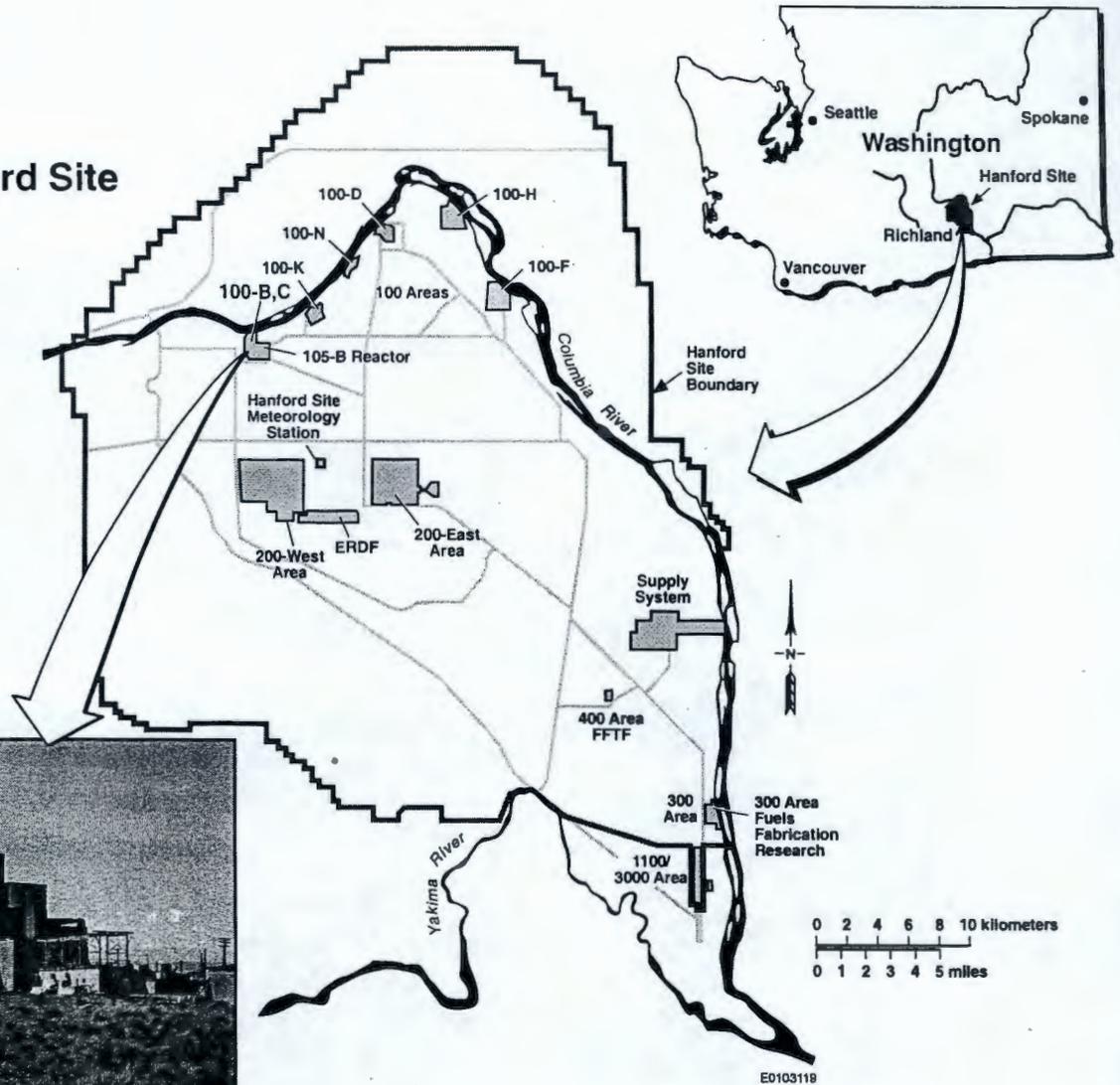
What is the preferred cleanup action?

The preferred interim removal action is Hazard Mitigation for Public Access. This alternative was selected based on its ability to provide protection of human health and the environment and its effectiveness in maintaining the facility as an historic property during the 10-year period. This alternative includes:

- Providing upgrades to facility infrastructures (electrical, ventilation, fire-suppression systems) to ensure that risks to the public and workers from remaining hazardous substances are minimized
- Decontaminating, removing, or encapsulating hazardous substances located in publicly accessible areas of the facility
- Performing routine surveillance and maintenance activities in all areas of the facility to protect workers and the public and to prevent releases of hazardous substances to the environment
- Performing a structural integrity assessment of the facility, including the 116-B exhaust stack.

This alternative would not only provide for maintenance of the areas already used for guided tours, but it would also make additional portions of the facility available for public access. These portions were selected based on their historical interpretation value and the feasibility of releasing them for managed public access. The total estimated cost of the preferred 10-year interim removal action is approximately \$3 million. Maintenance of the facility beyond the 10-year period and preparation/transportation of the reactor block to the 200 Area Plateau was not included in any cost estimates, and is not part of this cleanup action or within the scope of this document.

Hanford Site



Hanford's B Reactor Facility

Hanford Public Information Repository Locations:

PORTLAND

Portland State University
Branford Price Millar Library
934 SW Harrison
Attn: Michael Bowman (503) 725-3690

SEATTLE

University of Washington
Suzzallo Library
Government Publications
Attn: Eleanor Chase (206) 543-4664

RICHLAND

U.S. Department of Energy
Public Reading Room
Washington State University, CIC Room 101L
2770 University Drive
Attn: Terri Traub (509) 372-7443

SPOKANE

Gonzaga University Foley Center
E 502 Boone
Attn: Sarah Nelson (509) 323-6548

Hanford Clean Up Toll-free Line: 1-800-321-2008

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