



Engineering Evaluation/Cost Analysis for Disposal of Structural Concrete and Soil from the 183-H Solar Evaporation Basin

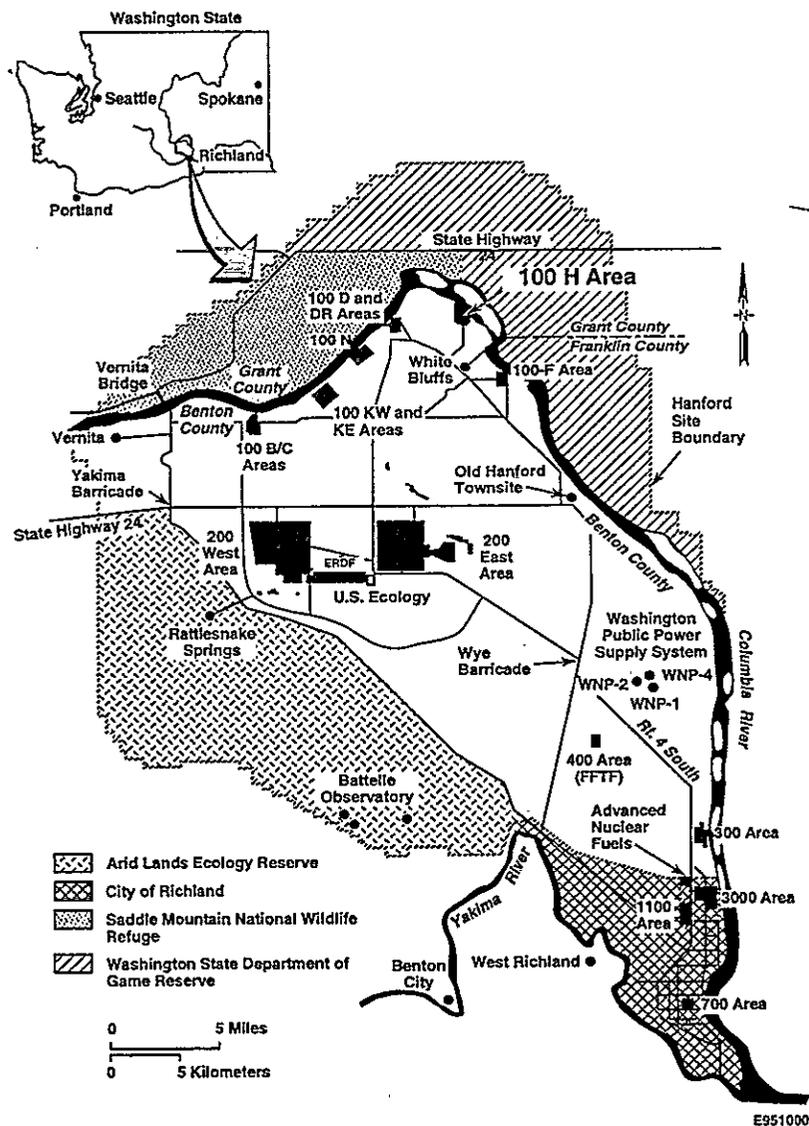
The U.S. Department of Energy and the Washington State Department of Ecology want your comments on a proposed removal action to dispose of waste generated during closure activities of the 183-H Solar Evaporation Basin. You will be commenting on an engineering evaluation/cost analysis (EE/CA) to assist in selecting a preferred response action alternative for disposing of contaminated structural concrete and soils stockpiled next to the 183-H Solar Evaporation Basin. The EE/CA was conducted in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). A 30-day public comment period on the EE/CA begins on September 12 and ends October 11, 1996.

BACKGROUND

The 183-H Solar Evaporation Basin is part of the 100-H Area along the Columbia River in the northern part of the Hanford Site (see maps). The 100-H Area originally contained a nuclear-defense, production-reactor facility that operated from October 1949 to April 1965. The 183-H Water Treatment Facility provided water treatment and reservoir capacity for the reactor process water system and operated concurrently with the 105-H Reactor.

Most of the 183-H Water Treatment Facility was demolished in 1974, but four basins were left intact and designated for use as a solar evaporation facility for chemical waste. Beginning in 1973, the basins were used for caustic solutions from Hanford's N Reactor fuel fabrication facilities, as well as miscellaneous chemicals. The liquid wastes were placed in the basins to allow the liquids to evaporate. In addition, from 1974 through 1985 the basins were used for treatment of liquid chemical wastes from the 300 Area fuel fabrication facilities.

Closure activities began in 1986 and by the end of 1990, all bulk (non-containerized) waste had been removed from 183-H). The focus of this EE/CA is on low-level contaminated concrete and soil contaminated above state cleanup levels.



REMOVAL ACTION

ALTERNATIVES

The materials to be removed will require disposal at a landfill designed to manage low levels of radiologically and chemically contaminated debris and soils. Further treatment of these wastes is not required.

1. **No Action:** consists of long-term storage of materials adjacent to the 183-H site located near the Columbia River. Stored wastes could release contaminants into the air and soil column, and would not provide long-term protection to human health and the environment. The total cost for this alternative is \$150,000 for post closure maintenance and monitoring over a 30-year time period.

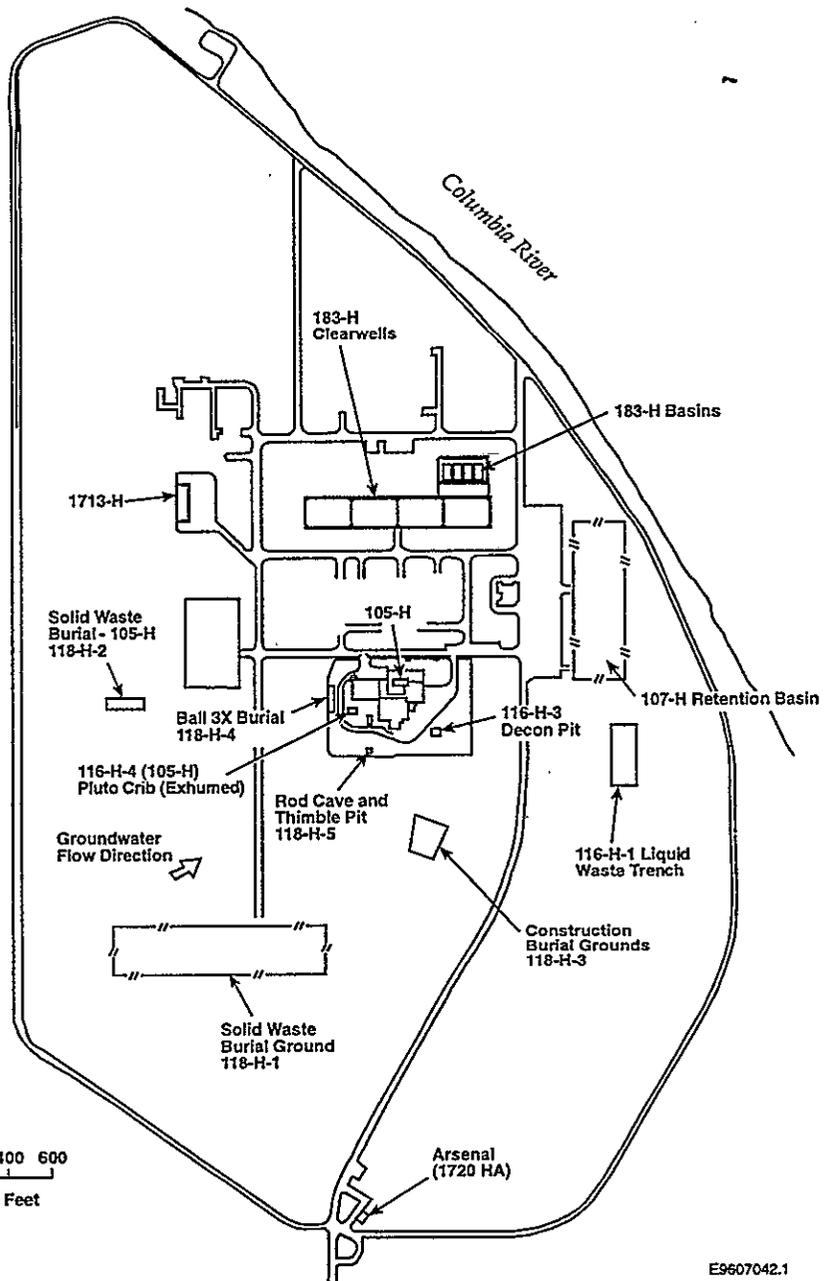
2. **Disposal at Low-Level Burial Grounds:** includes disposing of low-level waste at the low level burial ground (unlined trenches without liners or leachate collections systems) in the 200 Area of the Hanford Site. The unit cost is \$415/cubic yd for disposal at the low level burial ground. The total cost for this alternative is \$2,697,500.

3. **Disposal at Environmental Restoration Disposal Facility (ERDF):** the ERDF is a double-lined landfill with a leachate collection system located in the 200 Area that has been authorized under CERCLA to accept Hanford cleanup wastes.

The types of contaminated materials described in the EE/CA are similar to other Hanford wastes going into the ERDF and will not impact the operations or require an expansion of ERDF. The unit cost is \$60/cubic yd including transportation costs to ERDF, and the total cost is \$390,000.

The EE/CA analyzes the performance of each alternative using the following criteria:

- Overall protection of human health and the environment



- Compliance with applicable relevant and appropriate requirements (ARARs)
- Long-term effectiveness and performance
- Reduction of toxicity, mobility, and volume
- Short-term effectiveness
- Implementability
- Cost
- State acceptance
- Community acceptance

PREFERRED ALTERNATIVE

Based on the CERCLA criteria evaluation, the recommended alternative for the 183-H Solar Evaporation Basin structural concrete and soils is disposal at the ERDF. This alternative removes the potential for a release of hazardous substances that could adversely impact human health and the environment, is protective of workers, minimizes disposal costs. It is consistent with the ERDF Record of Decision and Explanation of Significant Difference.

*How Can You
Be Involved?*

A 30-day comment period will begin September 14, 1996. Written comments may be submitted during the comment period to the addressee listed. All public comments will be considered in making the final decision.

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The Engineering Evaluation/Cost Analysis for Disposal of Structural Concrete and Soil from the 183-H Solar Evaporation Basin (BHI-00872) document is available for review at the Hanford Public Information Repositories listed below, or you may request a copy by calling the Hanford Cleanup toll-free number at 1-800-321-2008.

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RICHLAND

U.S. Department of Energy Public
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