

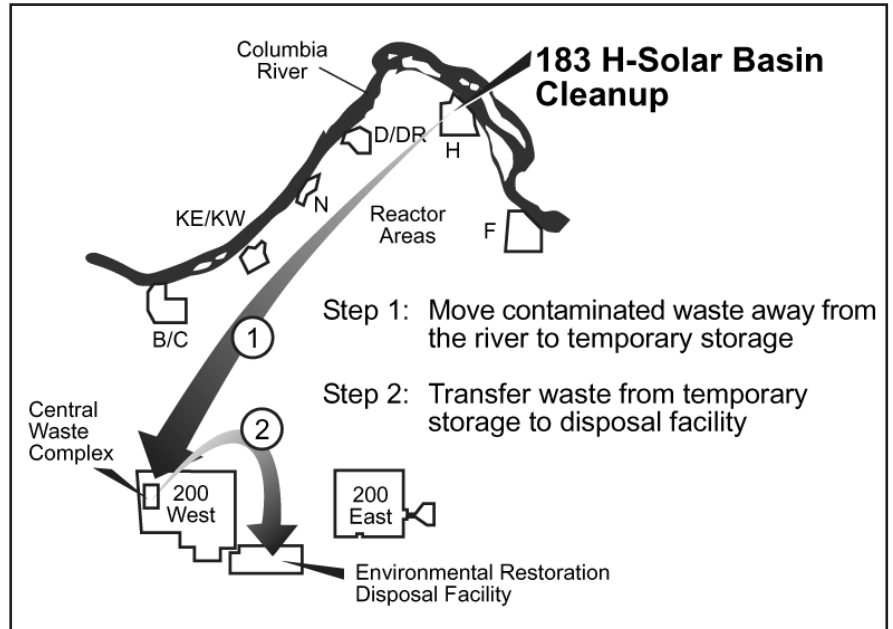


Engineering Evaluation/Cost Analysis Disposal of 183-H Solar Evaporation Basin Waste Stored at Hanford's Central Waste Complex

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



Removal of contaminated residue from the 183-H Solar Basin



Proposed transfer of 183-H contaminated waste to the disposal facility

The agencies responsible for Hanford cleanup invite the public to comment on the disposal method for waste generated during cleanup of the 183-H Solar Evaporation Basins. This waste is being stored temporarily at the Central Waste Complex, a storage facility for dangerous and mixed waste containers.

A public comment period will be held from March 31 through April 29, 2003.

Following this 30-day public comment period, the Tri-Party Agencies will consider the input received from the public before making a final determination on the disposal method to be used for the 183-H Solar Evaporation Basin waste.

The U.S. Department of Energy, the U.S. Environmental Protection Agency, and the Washington State Department of Ecology (the Tri-Party Agencies) issued an Engineering Evaluation/Cost Analysis (EE/CA) that evaluates alternatives for disposal of waste that resulted from cleanup of the 183-H Solar Evaporation Basins.

Background

The 183-H Basins, located in the 100 Area of the Hanford Site, were a series of 16 concrete basins used to support the water treatment facility at H Reactor. In 1973 four of the basins were designated to treat solutions generated during fabrication of nuclear fuel in the 300 Area, and in 1974, the remaining 12 basins were demolished.

The treatment process for the solutions consisted of natural solar evaporation and pH adjustment to reduce the volume of waste. The last shipment of waste was sent to the basins in 1985 and the four basins were closed from 1986 to 1996. Closure consisted of removing sediment, liquid, and debris from the basins, removal of contaminated concrete, demolishing and disposing of the remaining concrete structure and equipment, and removing the underlying soil. Low-level waste (concrete and soil) from closure was sent directly to the Environmental Restoration Disposal Facility (ERDF) after its construction and operation. The ERDF is a *Comprehensive Environmental, Response, Compensation and Liability Act (CERCLA)* approved landfill located on the Central Plateau.

However, approximately 12,300 containers of mixed low-level waste were generated prior to the construction of ERDF and was currently being stored at the Hanford Central Waste Complex. Some of the containers (approximately 5,700) will require treatment prior to disposal at ERDF to eliminate the waste characteristic of ignitability and to meet standards for toxic metals. Disposing of the mixed waste to the ERDF minimizes the risk of continuous storage and maintenance, and accelerates final disposal of the waste.

Disposal alternatives evaluated

Alternatives evaluated were identified based on their ability to be protective of workers managing the waste, human health, and the environment and eliminating the potential for release of contaminants. The alternatives are:

- **Alternative 1 - No Action; Continued Storage**
The waste containers would continue to be stored at Hanford's Central Waste Complex. The containers would be inspected on a regular basis and maintenance would be performed as needed.
- **Alternative 2 - Treatment and Disposal at the ERDF**
The containers would be prepared for shipment at the Central Waste Complex and transported to the ERDF for disposal. Waste requiring treatment would be treated at the ERDF prior to disposal. The total cost would be approximately \$3.7 million.
- **Alternative 3 - No Treatment and Disposal at the ERDF**
The waste containers would be prepared for shipment at the Central Waste Complex; the waste would then be transported to ERDF without treatment. The total cost would be approximately \$2.1 million.

Recommended disposal alternative

Based on effectiveness, implementability, and cost, the recommended alternative is Alternative 2 (Treatment and Disposal at the ERDF). This alternative provides overall protection and meets regulatory requirements while providing a balance between cost and long-term protection of human health and the environment. While Alternative 3 (No Treatment/ERDF Disposal) would cost less, it would not be protective of human health and the environment, since some of the waste must be treated prior to disposal.

How can you become involved?

The *Engineering Evaluation/Cost Analysis for Disposition of Mixed Waste from the 183-H Solar Evaporation Basins* (DOE/RL-2002-63) is available for review at the Hanford Information Repositories listed below and on the Internet at:

<http://www.hanford.gov/tpa/changelist.htm>
(Modifications Currently Undergoing Public Comment)

No public meetings are scheduled at this time, but all requests will be considered by the Tri-Party Agencies. All public comments will be considered prior to the final selection of a disposal method for the 183-H waste. The agencies will send a comment and response summary to all individuals who provide comments or request a copy of the summary, and will place the summary in the Hanford Information Repositories.

To request copies of the document or to submit comments, contact:

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Hanford Public Information Repository Locations

Portland

Portland State University
Branford Price and Millar Library
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U.S. Department of Energy Public Reading Room
Washington State University, Tri-Cities
Consolidated Information Center, Room 101-L
2770 University Drive
Attn: Terri Traub (509) 372-7443

Seattle

University of Washington
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Or call the Hanford Cleanup Line at 1-800-321-2008

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