

Tri-Party Agreement

FACT SHEET

Proposed Plan for the K Basins Interim Remedial Action - Spent Nuclear Fuel Project

*The U.S. Environmental Protection Agency and the U.S. Department of Energy want your opinion on the Proposed Plan for the K Basins Interim Remedial Action. The action includes removing spent nuclear fuel, sludge, water, and debris from the basins per previous commitments to the public. It also includes treatment as appropriate to make the sludge safe for interim storage and/or disposal. The public comment period is from **May 15 through June 28, 1999**. In addition, a public meeting will be held on **June 10, 1999**. All comments will be considered by the agencies before making the final decision.*

Send comments in writing or electronically to:

Larry Gadbois

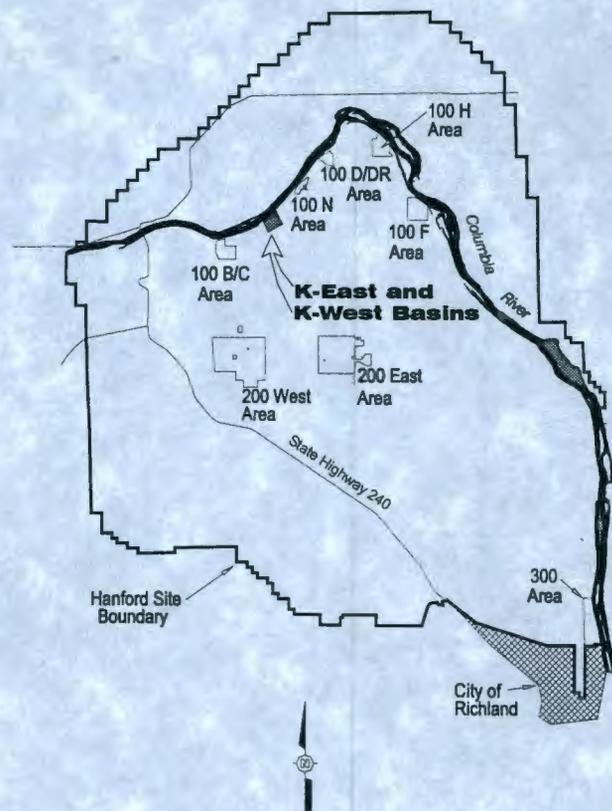
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Background

More than 80 percent of the Department of Energy's national inventory of spent nuclear fuel is stored in Hanford's K Basins. The basins were built in the 1950s to support operation of the K East and K West reactors and are located less than 400 yards from the Columbia River. In addition to the fuel, the basins contain radioactive sludge, water, and debris. Much of the highly radioactive fuel is corroded and crumbling, and the K East

Basin has a history of serious leaks that have contaminated the groundwater.

An Environmental Impact Statement issued in 1996 evaluated alternatives for safely managing the fuel. The alternative selected was to remove the fuel from the basins, dry it, and store it in a new facility in the 200 Area of the Hanford Site. The Environmental Impact Statement also described methods for managing the water and debris. However, there was little known about the sludge at the time so sludge management was not evaluated in detail.



In 1998, the Environmental Protection Agency, the Washington State Department of Ecology, and the Department of Energy decided that the cleanout of the K Basins could be done more effectively as a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) interim remedial action. CERCLA provides the regulatory agencies greater involvement in the K Basins cleanout. The Environmental Protection Agency was identified as the lead regulatory agency for the CERCLA action. The parties agreed that the decisions about fuel, water, and debris made using the Environmental Impact Statement would stay the same under the CERCLA action, but that more evaluation of sludge management would be required.

What Options Were Evaluated?

The Department of Energy prepared a Focused Feasibility Study (DOE/RL-98-66) to support the interim remedial action. The study summarizes the previous decisions about fuel, water, and debris management. The study also identifies potential facilities for storing or disposing the sludge when it is removed from the K Basins and evaluates alternatives for treating the sludge to meet storage and/or disposal requirements. The alternatives included chemical, physical, thermal, and solidification treatment technologies.

Although the volume of sludge is not large (about 50 cubic meters, which would fill about 6 dump trucks), the sludge is a complex waste. The challenges in managing the sludge include the following:

- The sludge is highly radioactive and contains high concentrations of transuranic constituents.

- Some of the sludge has a high concentration of spent nuclear fuel particles.
- Some of the sludge contains metal particles that are reactive.
- The sludge contains hazardous metals and PCBs (polychlorinated biphenyls).
- The particle size and chemistry of the sludge varies widely depending on its location in the basin.

The Focused Feasibility Study concluded that there were advantages and disadvantages to all of the treatment alternatives, and that no single alternative was right for all of the sludge.

What is the Preferred Alternative?

The Environmental Protection Agency and the Department of Energy identify their preferred alternative in the Proposed Plan for the K Basins Interim Remedial Action (DOE/RL-98-71). The Proposed Plan and public comments will serve as the basis for a CERCLA Record of Decision to be issued later this summer.

The preferred alternative has two parts. First, the alternative commits to continuing the K Basins cleanout, including removing the fuel, sludge, water, and debris from the basins and deactivating the basins. The 2,100 metric tons of fuel would be moved to another facility in the 100-K Area to be dried, then transferred to the 200 Area for storage. The debris would be taken to the 200 Area for disposal in the Environmental Restoration Disposal Facility. The water removed from the basins (more than 3 million gallons) would be pretreated as it is removed, then transferred to a facility in the 200 Area for further treatment and disposal. The basins would be deactivated by decontaminating surfaces, removing old equipment, and sealing off the basins.

Removing the fuel, sludge, water, and debris from the K Basins and deactivating them is very important to protect public health and the environment from further releases.

The second part of the preferred alternative addresses sludge management. The preferred alternative is to develop a hybrid system for treatment because no single treatment alternative is ideal for the entire volume of sludge. The 50 cubic meters of the sludge would be removed from the basins as currently planned. The sludge would not undergo extensive treatment immediately upon removal. Instead, the sludge would undergo just enough treatment to make it safe for interim storage. The sludge would then be taken to an environmentally protective facility in the 200 Area for interim storage. At a later time, the different fractions of sludge would be treated using the treatment alternative or combination of alternatives that is protective and technically feasible for each fraction.

More work is needed to decide exactly which treatment alternative is right for each sludge fraction. The Environmental Protection Agency and the Department of Energy commit to providing further opportunity for public comment as appropriate when the hybrid alternative is more fully developed.

How Will the Cleanup at the K Basins be Regulated?

The K Basins regulatory package consists of the original Environmental Impact Statement, the Focused Feasibility Study, and the Proposed Plan. All cleanup at the K Basins will be done in accordance with

recently-established Tri-Party Agreement milestones (M-34-00) for the Spent Nuclear Fuel Project. These milestones require the Department of Energy to begin removal of spent fuel from the K Basins by November 30, 2000 and to complete removal of spent fuel, sludge, debris, and water from the basins by July 31, 2007.

Following this round of public comments, the Environmental Protection Agency will issue a CERCLA Record of Decision documenting a preferred course of action.

How Can You Be Involved?

Give the agencies your opinions about the K Basins Proposed Plan during the public comment period from **May 15 through June 28, 1999**. The Proposed Plan and the Focused Feasibility Study will be posted on the internet during the public comment period at the following address: <http://www.hanford.gov/snf/kbasin.html>. To request a copy of the Proposed Plan, call the Hanford Cleanup toll-free line at 1-800-321-2008.

A public meeting on the Proposed Plan will be held as follows:

June 10

**Tower Inn
Lewis Room**

**1515 George Washington Way
Richland, Washington**

7:00 p.m. to 9:00 p.m.

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