



## Changes Proposed to Hanford's Tri-Party Agreement

# New Milestones for K Basins Spent Nuclear Fuel Project and K Basins Facility Transition Activities

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

### REQUEST FOR PUBLIC COMMENT

Your review and comment is requested on proposed Tri-Party Agreement milestones and target dates for the U.S. Department of Energy's (DOE) K Basins Spent Nuclear Fuel Project. These proposed changes will direct current project activities and removal of 2,100 metric tons of spent nuclear fuel from two basins near the banks of the Columbia River. Milestones also are proposed for the completion of subsequent basin cleanup and transition to DOE's Environmental Restoration Project. **Public comments will be accepted from June 9 to July 23, 1997.**

To request a copy of the document, or to submit comments either written or electronically, please contact:

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### BACKGROUND

The highest near-term cleanup priority at the Hanford Site is the two million-gallon K Basin pools that store 80 percent of the DOE's national inventory of spent nuclear fuel. Less than a quarter-mile from the Columbia River, the basins are adjacent to the shut-down K East and K West reactors.

The basins contain approximately 105,000 individual fuel assemblies (fuel rods grouped together in sealed or open canisters). These are "spent" fuel rods which have been exposed to a sustained chain reaction in Hanford's N Reactor. Water in the basins cools the highly radioactive spent fuel and provides a radiation shield for facility workers.

As the damaged fuel and canisters corrode, radioactive materials are being released into the basins. Approximately 70 cubic meters (2,472 cubic feet) of contaminated sludge has accumulated in the basins, and more than 57 million liters (15 million gallons) of contaminated water has leaked to the surrounding soil and groundwater.

### INITIAL PLAN

Hanford's K Basins represents the #1 spent nuclear fuel safety issue in the DOE complex. In 1994, the Defense Nuclear Facilities Safety

Board (DNFSB) stated that an integrated program plan should be formulated on a high priority basis to address the safe interim storage of the fuels.

In response to these concerns, DOE issued in 1995 an Environmental Impact Statement Record of Decision for Spent Nuclear Fuel. The Record of Decision called for the removal, stabilization and transfer of the fuel from both basins to a dry storage facility currently under construction in the interior of the Hanford Site's 200 East Area. The Record of Decision also specified that the basin sludges be removed and disposed of using the high level waste vitrification process. Disposal of debris and other articles from the basins will be accomplished through existing Hanford site waste disposal practices.

This change in direction required renegotiation of Tri-Party Agreement spent fuel milestones and commitments. Facility transition milestones also are proposed which ensure that the basins will be properly decontaminated and decommissioned and transferred to the Environmental Restoration Project for final disposition.

### PRINCIPLE ISSUES

In their negotiations, Ecology and DOE followed advice from the Hanford Advisory Board and numerous stakeholders to complete negotiations and "get on with cleanup" of the K Basins. Among the issues resolved by the negotiation team were:

- ▲ Identifying the regulatory pathway for the project. The Tri-Parties propose to use the Comprehensive Environmental Response, Compensation and Liability Act, commonly known as Superfund, which offers appropriate enforcement avenues without causing unnecessary project delay.
- ▲ Ensuring that polychlorinated biphenyls, commonly known as PCBs, discovered in the K East Basin sludges are managed properly. The proposed interim resolution for these sludges is storage in dedicated tanks. The Tri-Parties are continuing to work together to develop a reasonable means of complying with the requirements of the Toxics Substances Control Act (TSCA) and in assessing the extent to which meeting Resource Conservation and Recovery Act (RCRA) requirements will suffice for both.
- ▲ The milestone package was structured to provide flexibility in near-term K Basin work schedules, while maintaining an accelerated project schedule that addresses the environmental issues and safety risks. This included aligning DOE and DNFSB milestones with regulatory requirements.

# SPENT NUCLEAR FUELS PROJECT/TRANSITION MILESTONES

FISCAL YEAR

Task Name	Finish	FISCAL YEAR																							
		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005					
		Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3	Qtr 1	Qtr 3			
<b>Enforceable Milestones</b>																									
Major M-34-00A	12/31/05																			Complete K Basins Facility Transition					
Interim M-34-03	6/30/97	Complete CERCLA Engineering Evaluation/ Cost Assessment																							
Interim M-34-05 (Annual)	5/31/97	Issue Annual Debris Report to Ecology																							
Interim M-34-08	9/30/00	Initiate Full-Scale K-East Basin Sludge Removal																							
Interim M-34-10	8/31/01	Complete Sludge Removal From K Basins																							
Interim M-34-16	2/28/99	Initiate Removal of K-East Basin Spent Fuel																							
Interim M-34-18	7/31/00	Complete Removal of K-East and K-West Basins Spent Fuel																							
Interim M-34-19	7/31/00	Initiate Basin Water Remediation																							
Interim M-34-20	9/30/01	Complete Removal/Treatment and Remediation of K-East Basin Water																							
<b>Target Dates</b>																									
Target M-34-04-T01	5/31/97	Issue Draft Preliminary Safety Assessment																							
Target M-34-06-T01	10/31/98	Initiate K-West Canister Cleaning																							
Target M-34-07-T01	1/31/00	Complete Final Safety Basis for K Basins Sludge																							
Target M-34-09-T01	2/28/01	Complete K Basin Debris Removal																							
Target M-34-11-T01	12/31/97	Issue K Basins (SNF) Transition Turnover Criteria																							
Target M-34-12-T01	5/31/98	Complete Spent Fuel Operational Readiness Review																							
Target M-34-13-T01	12/31/97	Complete Construction K-West Integrated Water Treatment System																							
Target M-34-14-T01	12/31/98	Complete Construction of K-East Integrated Water Treatment System																							
Target M-34-15-T01	5/31/98	Initiate Removal K-West Basin Spent Fuel																							
Target M-34-17-T01	9/30/98	Complete Installation/Construction K Basins Fuel Retrieval Systems																							

Additional milestones are proposed for transition and can be reviewed in the document

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## NEW STRATEGY

Ecology and DOE concluded negotiations in April 1997. The new spent fuel strategy is reflected in this proposed change, deleting the old TPA Milestone M-34-00 and adding a new milestone series, M-34-00A. Key elements of the new milestone series include:

- ▲ Begin removal of spent nuclear fuel from the K Basins to the Canister Storage Building by May 1998
- ▲ Complete fuel removal from both basins by July 2000
- ▲ Begin remediation of K East Basin water to reduce tritium levels by July 2000
- ▲ Complete removal of sludge and debris by August 2001
- ▲ Transfer K Basins to the DOE's Facility Transition Program by 2001
- ▲ Begin removal of all water from the basins by 2003
- ▲ Complete transition and transfer to the Environmental Restoration Project by 2005. The basins will be kept in a safe, low-cost maintenance condition until final disposition decisions are made.

**For More Information on the  
Tri-Parties' Proposed Modifications,  
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