

Draft Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Five-Year Review Report

U.S. Department of Energy – U.S. Department of Energy – U.S. Department of Energy

The U.S. Department of Energy (DOE) would like your input on the Draft Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Five-Year Review Report. The purpose of the five-year review is to determine whether the cleanup (remedial) actions implemented at the Hanford site are protective of human health and the environment. The Draft CERCLA Five-Year Review Report evaluates the protectiveness of current and past Hanford cleanup actions. A 30-day public comment period will be held May 8 through June 15, 2006. Public input will be considered before the report is finalized.

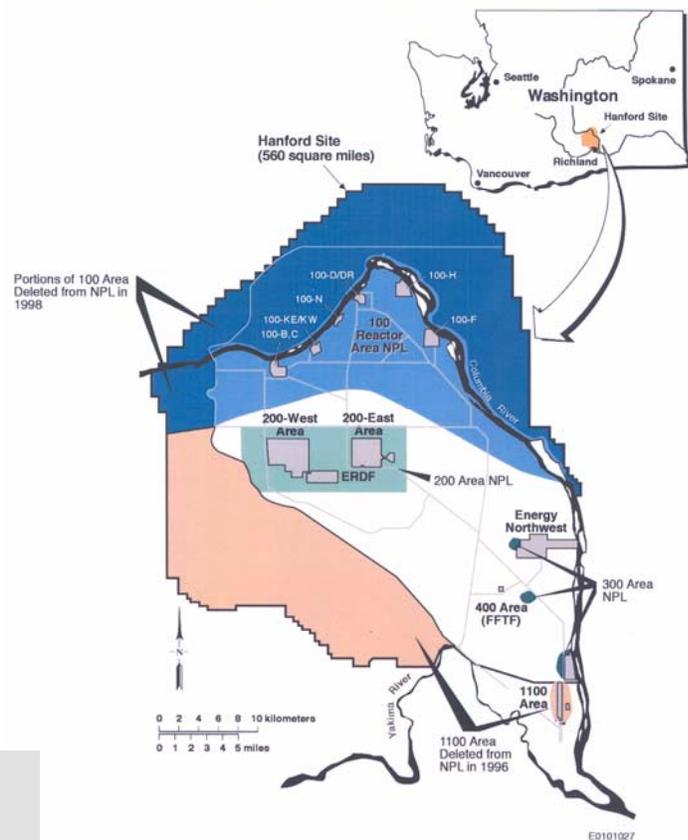
Background

What is the purpose of the five-year review? The purpose of a five-year review is to determine whether the implemented remedy at a site is protective of human health and the environment. A CERCLA Five-Year Review is conducted every five years to evaluate completed cleanup actions in areas where hazardous substances, pollutants, or contaminants remain or will remain above levels that allow for unlimited use and unrestricted exposure. The first Five-Year Review Report was completed in 2001. This second five-year review has updated the first five-year review to reflect decisions made and activities initiated, terminated, or completed between 2001 and the present.

What is the scope of this five-year review? The scope of this review was limited to operable units listed in the Hanford Tri-Party Agreement (TPA) as past practice units remediated under CERCLA. For example:

- **100 Area:** removal of contaminated soil, decontamination and/or demolition of contaminated buildings, treatment of contaminated groundwater, removal of spent nuclear fuel

Hanford Site National Priority List Designations



Public Comment

The U.S. Department of Energy wants your feedback on the Draft CERCLA Five-Year Review Report. The public comment period will run from **May 8 through June 15, 2006.**

- **200 Area:** inactive soil disposal sites, inactive facilities, contaminated groundwater and the Environmental Restoration Disposal Facility
- **300 Area:** removal of contaminated soil waste sites and debris, treating the material, as appropriate, and disposing of material in an appropriate facility
- **1100 Area:** cleanup completed except for a few hazardous waste areas being managed by caps and institutional controls

This review did not include ongoing waste management activities, active treatment, storage and/or disposal facilities or tank farm operations.

Why are five-year reviews performed? CERCLA 121(c) requires five-year reviews on remedial actions when hazardous substances, pollutants, or contaminants will remain on site above levels that allow for “unlimited use and unrestricted exposure.” At Hanford we also review remedial actions that are not yet completed, such as long-term groundwater pump and treat systems and large removal actions such as the demolition of the 300 Area industrial complex.

Who performs the review? The National Contingency Plan and Executive Order 12580 make the Secretary of Energy responsible for insuring that five-year reviews are conducted at DOE sites. The TPA allows for the U.S. Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology) to independently perform five-year reviews. EPA performed the first Hanford five-year review in 2001. DOE conducted this 2006 review following the statutory and regulatory provisions for five-year reviews and formal DOE and EPA guidances and will submit it to the EPA for concurrence with the protectiveness determinations.

What is the outcome of a five-year review? The purpose of a five-year review is not to reconsider remedial cleanup decisions; it is an evaluation of the implementation and performance of the

selected remedy to determine if the remedy is or will be protective when completed (i.e., is working as intended). The DOE and/or EPA may conclude that the remedy is protective and that no further action is necessary. Alternatively they may conclude that further evaluation is needed, recommend certain actions to improve the efficiency of a remedy, or recommend changes in the remedy. Recommendations from the five-year review will be considered and if changes are needed, they will be implemented through Explanation of Significant Differences (ESD) or Record of Decision (ROD) amendments.

Components of the Five-Year Review Process

Community Involvement and Notification – The DOE conducted a public workshop in December 2005 to discuss the scope of the review. A webpage containing information and outcomes of the workshop is located at www.hanford.gov/ under the Public Involvement section. DOE also conducted outreach meetings with the Hanford Advisory Board, Oregon Hanford Cleanup Board, members of the Natural Resource Trustee Council, Tribal Nations and other stakeholders. These activities focused on the document scope and review process. In addition a 30-day public review and comment period will provide the Tribal Nations, stakeholders and the public the opportunity to comment on the draft document and participate in outreach activities in Tri-Cities and Oregon.



Document Review – Document review for the five-year review included looking at each decision document, such as RODs and ESDs, to ensure that all requirements were properly understood and implemented. The 2001 Five-Year Review Report was also examined to verify that its recommendations were implemented.

Data Review and Analysis – Sampling plans, operation and maintenance plans, and study conclusions were reviewed.

Site Inspection – Site inspection information obtained from ongoing cleanup activities was incorporated.

Interviews – Interviews conducted during ongoing cleanup activities were incorporated.

Assess Protectiveness – Protectiveness is determined by answering the following three questions:

- 1) Is the remedy functioning as intended by the remedy selection documents?
- 2) Are the exposure assumptions, toxicity data, and Remedial Action Objectives used at the time of remedy selection still valid?
- 3) Has any other information come to light that could call into question the protectiveness of the remedy?

DOE will seek concurrence from EPA on the protectiveness determinations made in the five-year review. Concurrence by EPA will be documented in a statement attached to the Final Five-Year Review Report. If concurrence is not given, EPA will make its own determinations and write protectiveness statements that will be issued as a supplement to the Final Five-Year Review Report.

Findings of the 2006 CERCLA Five-Year Review

The five-year review evaluated the effectiveness of Hanford's Environmental cleanup actions and whether or not they are protective of human health and the environment. The report documents the evaluation of whether the selected remedies have, or will accomplish, the objectives established in cleanup Records of Decisions (RODs).

During the course of conducting this review, some issues were noted and corrective actions identified. DOE will follow the CERCLA process to correct any deficiencies and/or identified protectiveness concerns.

Summary of the findings

- The remedies selected thus far for 100, 200, 300 and 1100 Area Operable Units containing soil

contamination sites where the remove, treat, and dispose remedy, including institutional controls and use limitations, was selected are, or will be, protective of human health and the environment when the work is completed.

- With two exceptions, the selected remedies and interim actions for the groundwater operable units across the Hanford Site are, or will be, protective of human health and the environment when the work is completed. The two exceptions are the 300-FF-5 and the 100-NR-2 Operable Units.
- At the 300 Area 300-FF-5 Operable Unit, the selected remedy of monitored natural attenuation for the uranium contamination in the groundwater is not achieving the remedial action objectives established in the ROD. However, institutional controls are in place to prevent use of the groundwater. Therefore, for this operable unit, the remedy is considered protective in the short-term because institutional controls are in place. Follow-up actions are necessary to determine long-term protectiveness because remedial action objectives are not expected to be met. The remedial actions and remedial action objectives are being re-evaluated.
- For the 100-NR-2 Groundwater Operable Unit, the remedial action objectives for the strontium-90 contaminant in the groundwater established in the ROD are not being met. Alternative remedies are being tested. Institutional controls are in place to prevent use of the groundwater. Therefore, for this operable unit the remedy is considered protective in the short-term.
- Two pump-and-treat systems and a vapor extraction system were installed as interim actions to treat groundwater contamination in the 200 Areas. The 200-ZP-1 Groundwater Operable Unit has a pump-and-treat system to remove carbon tetrachloride from the groundwater. The 200-PW-1 (formerly 200-ZP-2) Soil Operable Unit has a vapor extraction system to remove carbon tetrachloride from the soil. The 200-UP-1 Groundwater Operable Unit has a pump-and-treat system to remove uranium and technetium-99 from the groundwater.
- For the 200 Area Contaminated Soil Site Operable Units, remedial investigations and feasibility studies are being conducted. Final remedies have not yet been selected or implemented. Therefore, no protectiveness determinations can be made. Some removal actions have been initiated or completed. It is anticipated that the results of the removal actions will be consistent with the final remedies selected through

the remedial investigation/feasibility study and ROD processes.

- The remedial action objectives established in the 1100 Area Operable Unit ROD were met, the remedial actions selected for the 1100 Area Operable Units were completed, the remedy is protective, and the 1100 Area National Priority List (NPL) site was deleted. During the last five years, some residual DDT contamination at the Horseshoe Landfill was

detected and removed. Groundwater contaminants in the vicinity of the Horn Rapids Landfill were reduced below the drinking water standard. Asbestos waste disposed in the Horn Rapids Landfill is still in place and secure. Because contamination was left in place, the 1100 Area will continue to be included in future five-year reviews.

How you can become involved

DOE requests public input on the evaluations of the remedial actions identified in the report. A 30-day public review and comment period will be held from **May 8 through June 15, 2006**. Public input will be considered until the report is finalized. Please submit written comments to:

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For more information on the Draft CERCLA Five-Year Review Report and/or to submit an online comment, visit the CERCLA webpage at <http://www.hanford.gov/> under the Public Involvement section. Public comments and DOE responses will be posted on the *View Public Comments* section after the comment period ends, June 15, 2006.

The TPA agencies, DOE, EPA and Ecology, will be present to discuss the Draft CERCLA Five-Year Review Report at the following outreach activities:

May 10, 2006

Richland, Washington
Hanford Advisory Board River and Plateau Committee
Washington State Department of Ecology
Conference Room 3B-C
3100 Port of Benton
Time: 8:30 a.m. to 10:00 a.m.

May 23, 2006

Portland, Oregon
Oregon State Office Building
Room 140
Time: 7:00 p.m. to 10:00 p.m.

May 24, 2006

Hood River, Oregon
Hood River Valley Adult Center
2010 Sterling Place
Time: 7:00 p.m. to 10:00 p.m.

The draft document can be viewed on line at <http://www.hanford.gov/public/calendar/> (under the Public Comment Period section).

**To obtain a copy of the draft report call the
Hanford Cleanup Line 1-800-321-2008.**

The document is also available for review at the Public Information Repositories listed below.

HANFORD PUBLIC INFORMATION REPOSITORY LOCATIONS

Portland

Portland State University
Branford Price and Miller Library
934 SW Harrison
Attn: Judy Andrews (503) 725-4126

Richland

U.S. Department of Energy Public Reading Room
Consolidated Information Center, Room 101-L
Washington State University, Tri-Cities
2770 University Drive
Attn: Janice Parthree (509) 372-7443

Seattle

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

Spokane

Gonzaga University
Foley Center, East 502 Boone
Attn: Linda Pierce (509) 323-6110

Administrative Record and Public Information Repository:

Address: 2440 Stevens Center Place, Room 1101, Richland, WA

Phone: 509-376-2530

Web site address: <http://www2.hanford.gov/arpir/>

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