

START

9513316.0866

0041171

DOE/RL-95-48

Draft A

Proposed Plan for the 100-IU-5 Operable Unit

Date Published
April 1995



United States
Department of Energy

P.O. Box 550
Richland, Washington 99352



Approved for Public Release

TRADEMARK DISCLAIMER

Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

PROPOSED PLAN FOR THE 100-IU-5 OPERABLE UNIT

Hanford Site, Richland, Washington

DOE, EPA, AND ECOLOGY ANNOUNCE PROPOSED PLAN

This proposed plan identifies the preferred alternative for the 100-IU-5 **Operable Unit**, known as the White Bluffs Pickling Acid Cribs, located at the Hanford Site (Figure 1). The proposed plan is intended to be a fact sheet for public review that summarizes the information relied upon to recommend the preferred alternative.

This proposed plan is being issued by the Environmental Protection Agency (EPA), the lead regulatory agency; the Washington State Department of Ecology (Ecology), the support regulatory agency; and the U.S. Department of Energy (DOE), the responsible agency. The EPA, Ecology, and DOE are issuing this proposed plan as part of their public participation responsibilities under Section 117(a) of the *Comprehensive Environmental Response Compensation, and Liability Act* commonly known as the "Superfund Program," and the *National Environmental Policy Act of 1969*.

As presented in this proposed plan, no action is the preferred alternative for the final resolution of the 100-IU-5 Operable Unit. The preferred alternative is recommended because chemical concentrations detected in the soil at the site indicate that the cribs are unlikely to pose a significant risk to human health or the environment.

The preferred alternative is the initial recommendation of the EPA, Ecology, and the DOE. The alternative will be selected only after the public has had the opportunity to comment on this recommendation and all comments have been reviewed and considered. Comments may be made in person at the public meetings or may be submitted in writing. Written comments must be submitted by _____. Public comments will be addressed in a responsiveness summary as part of the record of decision (ROD), which is the legal decision document that specifies the cleanup remedy.

Send written comments to:
Dib Goswami, Unit Manager
Washington State Department of Ecology
1315 W. 4th Ave
Kennewick, WA 99336-6018

The public is encouraged to review the *Expedited Response Action Work Plan* (WHC-SD-EN-AP-113), the *White Bluffs Pickling Acid Cribs Expedited Response Action Proposal* (DOE/RL-93-48), and the *Pickling Acid Cribs Remedial Investigation/Feasibility Study* (DOE/RL-94-20). The Administrative Record file, which contains these documents and information used in the selection of the preferred alternative, is available for review at the information repositories listed at the end of this proposed plan.

28907 1/14
211694 1/12
25622 1/12

MARK YOUR CALENDAR

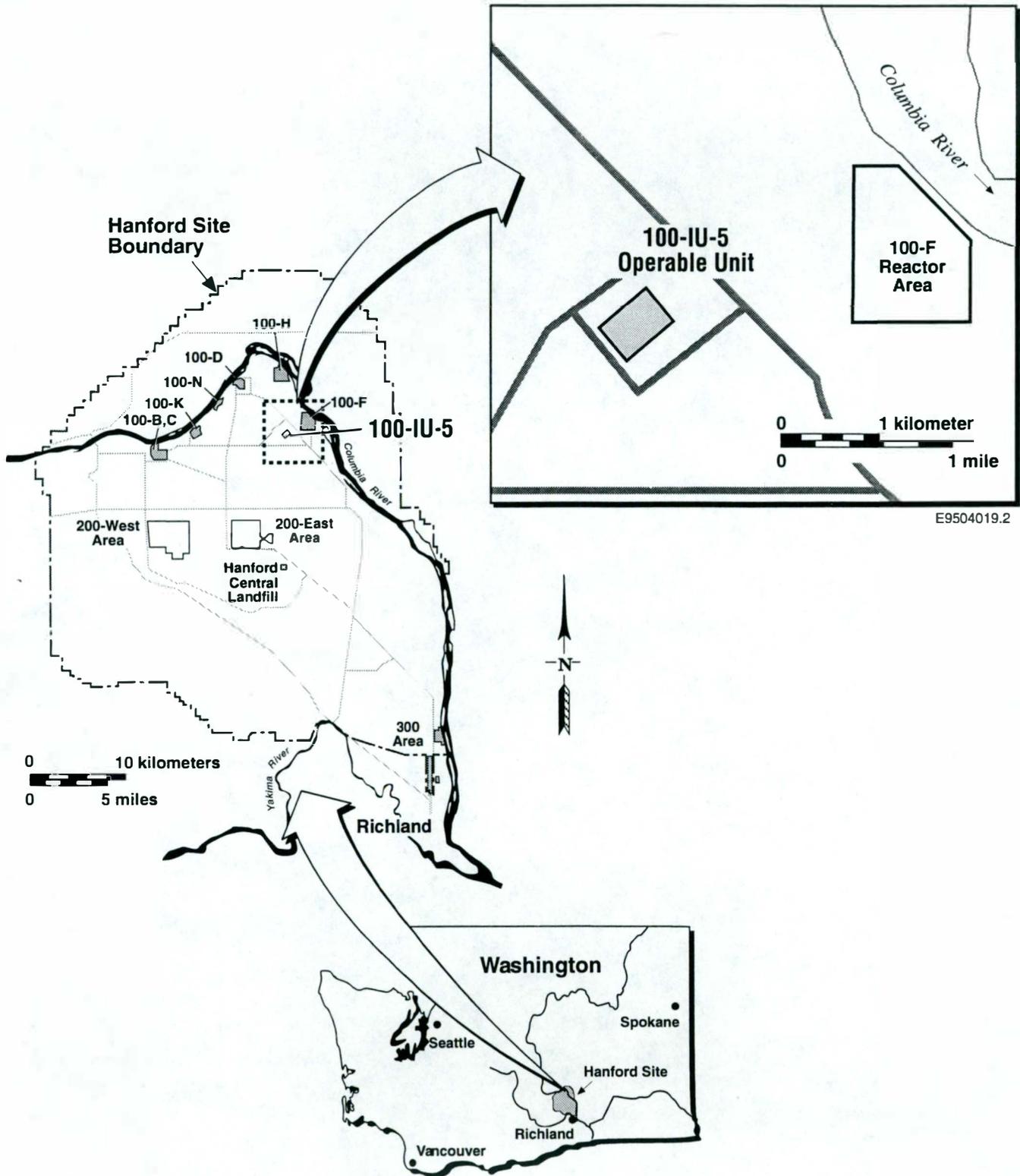
A 45-day public comment period for the 100-IU-5 Operable Unit proposed plan is scheduled from _____, 1995 through _____, 1995.

A public meeting on this proposed plan will be held as follows:

Date: ???
Time: ???
Place: ???

You will have an opportunity at the meeting to direct questions to the EPA, Ecology, and DOE representatives and comment on the preferred alternative.

Figure 1. 100-IU-5 Operable Unit.



SITE BACKGROUND

The Hanford Site is located in southeastern Washington (Figure 1). The 100 Area of the Hanford Site is located along the Columbia River and includes nine reactors that were used for plutonium production between 1943 and 1987. In 1989, the EPA placed the 100 Area on the **National Priorities List** because of the soil and groundwater contamination resulting from the past operations of the nuclear facilities.

The 100-IU-5 Operable Unit, is located about two kilometers (1.2 miles) west of the 100-F Reactor (Figure 1). The two cribs that make up the 100-IU-5 Operable Unit are just south of the old White Bluffs town site in the 600 Area of the Hanford Site. The cribs consist of excavated trenches filled with exposed gravel. The cribs lie side by side and are each approximately 61 meters long by 15 meters wide (200 feet by 50 feet). They vary in depth from about 2 meters to 3.1 meters (7 to 11 feet).

The White Bluffs Area was the location of construction activities for the Hanford Site between 1943 and 1959. After construction operations ended, all the White Bluffs construction support facilities were demolished. Little is known about the use of the cribs during the years of construction activity. It is known, however, that a pipe fabrication facility formerly located near the cribs prepared piping for installation in the reactor facilities. Therefore, the presumption is that during the years of construction activity, the pipe fabrication facility sent waste streams to the cribs through underground pipelines. The waste streams were believed to be primarily acid etch solutions containing spent nitric and hydrofluoric acids. No known radioactive contaminants were discharged into the cribs.

The 100-IU-5 Operable Unit addresses only soil contamination associated with the White Bluffs Pickling Acid Cribs. **Groundwater** contamination in the vicinity of the 100-IU-5 Operable Unit will be investigated as part of the 100-FR-3 Operable Unit, the groundwater operable unit for the 100-F Reactor Area.

The *1990 Hanford Federal Facility Agreement and Consent Order* stated that where immediate danger to the public or environment is possible, expedited response actions should be pursued to accelerate remediation of the Hanford Site. Expedited response action is the mechanism that allows for the

elimination of hazards that have the potential to be an immediate threat to the public or environment. Because the former use of the White Bluffs Pickling Acid Cribs is uncertain, they were targeted as an expedited response action site.

EXPEDITED RESPONSE ACTION SUMMARY

The EPA and Ecology recommended in a letter dated March 4, 1992, that DOE proceed with an expedited response action at the White Bluffs Pickling Acid Cribs Site. The DOE proceeded by preparing a *Expedited Response Action Project Plan* (WHC-SD-EN-AP-113). The project plan detailed activities that would be undertaken as part of the expedited response action proposal for site characterization, and provided a preliminary screening of potential remedial action alternatives. Site characterization activities were conducted in November 1992, and included geophysical exploration, and collecting and analyzing surface and subsurface soil samples from the cribs.

The *White Bluffs Pickling Acid Cribs Expedited Response Action Proposal* (DOE/RL-93-48) was completed in May 1993. The proposal, prepared using the information obtained through the site characterization activities, concluded that there are no contaminants at the site, and that the site poses no threat to human health or the environment. Because no contamination was identified for remedial action, the engineering evaluation and cost analysis that is usually associated with the expedited response action proposal was not required. The proposal recommended that a no action record of decision be pursued.

In September 1993, EPA and Ecology completed their review of the proposal and concurred with the DOE recommendation of pursuing a no action under the removal authority. In a letter addressed to the DOE dated September 7, 1993, EPA and Ecology directed DOE to pursue a final record of decision for 100-IU-5 site by preparing a remedial investigation/feasibility study and proposed plan as specified in 40 CFR 430.

SUMMARY OF SITE RISKS

The *White Bluffs Pickling Acid Cribs Expedited Response Action Proposal* identified anions and metals to be potential **contaminants of concern** in soil. Laboratory analytical results indicate that, with the exception of zinc, contaminants of concern are

present below background concentrations. Soil samples were analyzed for a broad spectrum of potential contaminants. No contaminants were detected in any of the samples at concentrations exceeding risk-based standards defined in the *Hanford Site Baseline Risk Assessment Methodology* (DOE-RL 1993) and the State of Washington's *Model Toxics Control Act*, Method B soil cleanup standards.

The single elevated concentration of zinc detected in soil is unlikely to be related to former waste disposal activities. While the zinc is above the background concentration for zinc, it is below risk-based limits as defined by the *Hanford Site Baseline Risk Assessment Methodology* and the *Model Toxics Control Act*, Method B.

The risk calculations indicate that there is unlikely to be significant risk to human health or the environment associated with the constituents detected in soil. The risk calculations indicate that the remedial actions are unlikely to be required to reduce health and environmental risks potentially associated with the constituents in soil.

PREFERRED ALTERNATIVE

Because the human health and ecological risk assessments concluded that the cribs posed no threat to human health or the environment, the recommended alternative for the 100-IU-5 Operable Unit is no action. The EPA and Ecology support the no action alternative.

SUPPORTING DOCUMENTS	ADMINISTRATIVE RECORD
<p>The public is encouraged to review the following documents to gain a better understanding of the 100-IU-5 Operable Unit:</p> <ul style="list-style-type: none"> • <i>White Bluffs Pickling Acid Crib Expedited Response Action Project Plan</i> (WHC-SD-EN-AP-113), Rev. 0 • <i>White Bluffs Pickling Acid Cribs Expedited Response Action Proposal</i> (DOE/RL-93-48), Draft A • <i>Pickling Acid Cribs Remedial Investigation/Feasibility Study</i> (DOE/RL-94-20), Rev. 0 	<p>The Administrative Record can be reviewed at the following locations:</p> <p>U. S. Department of Energy - Richland Operations Public Reading Room 2440 Stevens Center Place Richland, Washington 99352 509/376-7411 Hrs: Mon-Fri 8-12am and 1-4:30pm</p> <p>EPA Region 10 Superfund Record Center 1200 Sixth Avenue Park Place Building, 7th Floor Mail Stop: HW-074 Seattle, Washington 98101 206/553-4493 Hrs: 8am - 4:30pm</p> <p>Washington State Department of Ecology Nuclear Waste Library 719 Sleater-Kinney Road SE Capital Financial Building, Suite 200 Lacey, Washington 98503 206/407-7097 Hrs: Mon-Fri 8am - 5pm</p>
POINTS OF CONTACT	INFORMATION REPOSITORIES
<p><u>Department of Energy Representative</u> Glen Goldberg 100 Area Manager 509/376-9552</p> <p><u>U.S. Environmental Protection Agency Representative</u> EPA (Region 10) Pamela Innis Unit Manager 509/376-8665</p> <p><u>Washington State Department of Ecology Representative</u> Dib Goswami Unit Manager 509/736-3027</p>	<p>Supporting documents are available for review at the following repositories:</p> <p>University of Washington, Suzzallo Library Government Publications Room Mail Stop FM-25 Seattle, Washington 98195</p> <p>Gonzaga University, Foley Center E. 502 Boone Spokane, Washington 99258</p> <p>Portland State University, Branford Price Millar Library Science and Engineering Floor SW Harrison and Park P.O. Box 1151 Portland, Oregon 97207</p> <p>U.S. Department of Energy Richland Public Reading Room Washington State University, Tri-Cities 100 Sprout Road, Room 130 Richland, Washington 99352</p>

GLOSSARY

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - This is a federal law that establishes a program that enables the Environmental Protection Agency to identify hazardous waste sites, ensure that they are cleaned up, and allow other government entities to evaluate damages to natural resources. CERCLA is also known as the "Superfund law." CERCLA applies to the 100-HR-1 Operable Unit.

Contaminant of Concern - These are chemical and radioactive constituents that must be addressed by remedial action.

Expedited Response Action (ERA) - A response action that could be taken to address contamination problems that pose time critical risks.

Groundwater - Underground water that fills the spaces between particles of soil, sand, gravel, or fractures in rocks.

National Priorities List - A list of top-priority hazardous waste sites in the United States that are eligible for investigation and cleanup under the Superfund program.

Operable Unit - This is a subset of a larger Superfund CERCLA site, typically the subject of operable unit-specific investigations and remedial actions. These units are located near the reactors.