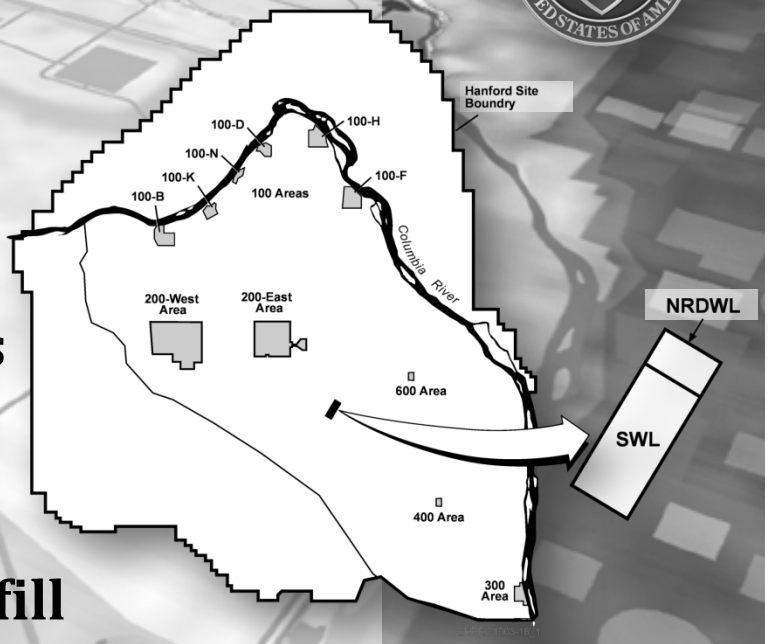
AVAILABLE FOR PUBLIC COMMENT

Revised Draft Environmental Assessment for Closing Hanford's Nonradioactive Dangerous Waste Landfill and Solid Waste Landfill



The U.S. Department of Energy (DOE) is issuing a National Environmental Policy Act of 1969 (NEPA) revised draft environmental assessment (EA). The revised draft EA evaluates the potential environmental impacts of closing the Nonradioactive Dangerous Waste Landfill and Solid Waste Landfill. We welcome your comments and suggestions. The Washington State Department of Ecology (Ecology) is a cooperating agency on this revised draft EA.

Background

Types of waste

NRDWL began operations in 1973 as a single landfill called the Central Landfill. In 1975, it was subdivided into two units – NRDWL and SWL. NRDWL received containerized nonradioactive dangerous waste chemicals and asbestos-containing waste material until 1988 when it stopped receiving waste.

SWL received asbestos-containing material, as well as non-dangerous and nonradioactive solid waste, until 1996 when it stopped receiving waste. SWL received slightly more than one million gallons of sewage effluent and 100,000 gallons of garage wash water in liquid waste trenches during its 21 years of operation. The garage wash water contained small amounts of organic solvents and degreasers.

Monitoring

Monitoring of groundwater, soil vapor, and leachate began in the mid-1980s before landfill operations ended. DOE continues to monitor NRDWL semi-annually for groundwater contamination and SWL quarterly for groundwater and soil vapor contamination.

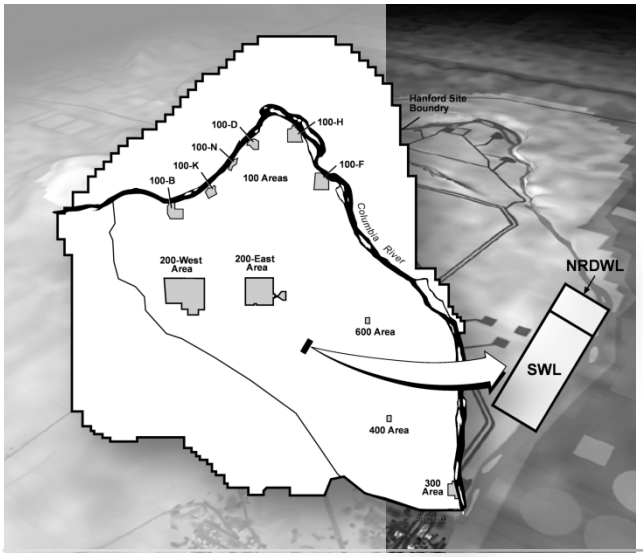
What do I need to know about this study?

This document addresses and incorporates comments from the 30-day (with a 30-day extension) public comment period held in May 2010 for a draft environmental assessment for closing the Nonradioactive Dangerous Waste Landfill (NRDWL) and the Solid Waste Landfill (SWL). Comments generally fell into the following categories:

- Waste inventory
- Groundwater contamination – past and present
- Alternatives; including selective retrieval
- Engineered barrier effectiveness and design
- Use of Borrow Area C; including previous NEPA analysis

This revised draft EA assesses the impacts of the proposed action and alternative actions. The proposed action is to install a permanent engineered surface barrier (also referred to as a final, permanent cover) over these two landfills to protect human health and the environment and to meet Washington State regulatory requirements for closed landfills.

Public Comment Period, August 29 – October 13, 2011



Background (continued)

Closure codes

NRDWL will close under the Dangerous Waste Regulations in Washington Administrative Code (WAC) 173-303 as a Resource Conservation and Recovery Act of 1976 (RCRA) facility. SWL was to be closed according to the requirements of WAC 173-350 Solid Waste Handling standards as a solid waste facility. However, in June 2010 Ecology and DOE agreed to close both landfills under the more stringent Dangerous Waste Regulations requirements. Closing the landfills together, in a single action and under one set of regulations should make planning and operations more efficient and be more protective of human health and the environment. Proposed closure activities would place a single, final, permanent cover over NRDWL and SWL.

Public Comment Period

A 45-day public comment period for this EA will run from August 29 – October 13, 2011.

The two adjoining landfills are in Hanford's "600 Area" near the center of the Site. NRDWL is about ten acres in size. SWL encompasses about 66 acres. After operations ended, both landfills were covered with local native, coarse-textured soil that ranges from 2 - 10 feet thick.

Relationship of EA to Tank Closure and Waste Management EIS

The Tank Closure and Waste Management (TC&WM) Environmental Impact Statement (EIS) evaluates proposed actions to address retrieval and treatment of tank waste, closure of single shell tanks, waste disposal, and the Fast Flux Test Facility. NRDWL and SWL are included in the cumulative impacts analysis in the TC&WM EIS. This revised draft EA's analysis and proposed action (what DOE would like to do) would take place in the "interim," before the TC&WM EIS decision process is complete.

Proposed Action and Alternatives

The proposed action is to close NRDWL and SWL by installing a final, permanent engineered surface barrier that would meet the state's regulations in WAC 173-303. Final grade of the cover would be completed to blend in with the existing surroundings to the extent practical. The site would be re-vegetated with native plants consistent with the Hanford Biological Resource Management Plan (BRMaP).

DOE would monitor the performance of both landfills long term. Post-closure care would include:

- Maintaining the integrity of the final, permanent cover
- Conducting periodic inspections
- Implementing a state-approved, regulatory compliant groundwater monitoring program; including installing six new monitoring wells
- Preventing run-on and run-off
- Filing a record in the Notice of Deed that will include steps to implement institutional controls to mitigate future human intrusion

Through the natural processes of evaporation and transpiration, DOE expects the final, permanent cover to prevent more than 98% of the average annual precipitation from percolating into the underlying waste. You can find more information about ET barriers in the following U.S. EPA publications:

- Evapotranspiration Cover Systems for Waste Containment at: http://www.epa.gov/tio/download/remed/epa542f11001.pdf
- Alternative Landfill Cover Project Profiles at:
- http://cluin.org/products/altcovers/

Use of Borrow Area C

The Hanford Comprehensive Plan (HCP) Environmental Impact Statement (EIS) identifies Borrow Area C as the preferred site for borrow material. The record of decision for the HCP EIS adopted a Comprehensive Land Use Plan for the Hanford Site, which includes planning and implementing policies and procedures that govern the review and approval of future land uses. Consistent with the HCP EIS record of decision, the revised draft EA analyzes the impacts of removing material, primarily silt/loam soils, from approximately 45 acres of Borrow Area C.

During Tribal consultations, Tribal Nations expressed opposition to the use of Borrow Area C, due to adverse impacts they believed it would cause to a traditional cultural property. The Tribes requested DOE to consider other borrow sources. In recognition of Tribal concerns, DOE will analyze in a separate NEPA document the impacts of extracting borrow material from Borrow Area C and other borrow sources on the Hanford Site.

The three other alternatives analyzed in this revised draft EA

- *No Action:* The two landfills would remain in place with little ongoing maintenance. NEPA regulations require the consideration of the No Action alternative. The No Action alternative provides a baseline against which impacts of other analyzed alternatives can be compared. "No action" does not necessarily mean doing nothing. Rather, the No Action alternative often involves maintaining or continuing the "status quo."
- Partial Removal, Haul, and Disposal (RHD): The Partial RHD alternative calls for removing all waste material from both landfills and impacted soils to as much as 10 feet below the waste material (30 feet below land surface). The RHD in this alternative is called "partial," because the excavation is only partially to groundwater. Replacement soil (approximately 2.5 million cubic yards) could be obtained from onsite borrow sources or from excess soil stockpiled from excavations for the Environmental Restoration Disposal Facility (ERDF) expansion cells. The replacement fill would be placed in the excavation and compacted/filled to grade. Because "clean closure" status is unlikely, a final, permanent cover that will comply with WAC 173-303 and WAC 173-350 regulations for NRDWL and SWL, respectively, would be required. Final grade of the cover would be completed to blend in with the existing surroundings to the extent practical. The site would be re-vegetated with native plants consistent with the BRMaP.
- Complete Removal, Haul, and Disposal (RHD): The Complete RHD alternative calls for removing all waste material from both landfills and all potentially contaminated soil from below the surface down to groundwater (120 feet below land surface). Removal would be done in stages. The top 30 feet would be removed as in Partial Removal RHD then a deep excavation (involving a series of steps or benches similar to a mining operation) would be completed to groundwater. All waste material and soil from directly below the landfills would be sent to ERDF for disposal. About 15 million cubic yards would be sent to ERDF for disposal. Additional excavated material (approximately 9 million cubic yards) must be removed to maintain slope stability within the mined excavation area. This material would be stockpiled and returned to the excavation as fill. Replacement fill (approximately 15 million cubic yards) would be obtained from an existing onsite borrow source, or from excess soils derived from an ERDF expansion, and stockpiled near the excavation. Fill material would be placed in the excavation and compacted/filled to grade. Because clean closure status is likely; a final, permanent cover would not be required, and the site would be re-vegetated with native plants consistent with the BRMaP.

Alternatives considered but not analyzed in detail include selective removal of four types of wastes – sanitary solid waste, asbestos, liquid trench waste, and drummed dangerous waste.

A 45-day public comment period for this EA will run from **August 29 – October 13, 2011.** We would like your feedback. **Please submit comments by October 13, 2011 to:**

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The *Environmental Assessment for Closure of the Non-Radioactive Dangerous Waste Landfill and Solid Waste Landfill (DOE/EA-1707D)* and related reports – including *NRDWL/SWL Closure/Postclosure Plan* (DOE/RL-90-17 Rev. 2) and *Groundwater Monitoring Plan for NRDWL and SWL* (DOE/RL-2010-28 Rev. 1) – can be found at www.hanford.gov on the Hanford Events Calendar under each date within the public comment. They are also available for review at the Public Information Repositories.

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Map: http://tinyurl.com/m8ebj

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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: Janice Parthree (509) 372-7443
Map: http://tinyurl.com/2axam2

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